

CWU Table Item #: 0191 (1 column)

NDP01 =	Negalux N18, a diphenylamine diazonium resin from PCAS
NDP02 =	diazo resin No. 8 from FAIRMOUNT CHEMICAL
NDP03 =	methyl methacrylate, ADS-MONOMER 01 (82/18) copolymer
NDP04 =	homopolymer of ADS-MONOMER 01
NDP05 =	hydroxyethylacrylate, ADS-MONOMER 01 (80/20) copolymer
NDP06 =	methyl methacrylate, ADS-MONOMER 01 (80/20) copolymer
NDP07 =	N-isopropyl-acrylamide, ADS-MONOMER 01 (80/20) copolymer
NDP08 =	N-isopropyl-acrylamide, ADS-MONOMER 01 (85/15) copolymer
NDP09 =	N-t-butyl-acrylamide, ADS-MONOMER 01 (75/25) copolymer
NDP10 =	N-t-butyl-acrylamide, ADS-MONOMER 01 (70/30) copolymer
NDP11 =	hydroxyethyl methacrylate, 2-propenoic acid, 2-methyl-2-[(2-nitrophenyl)methoxy]carbonyl]amino]ethyl ester, ADS-MONOMER 01 (85/10/5) terpolymer
NDP12 =	hydroxyethyl methacrylate, ADS-MONOMER 01 (95/5) copolymer
NDP13 =	hydroxyethyl methacrylate, ADS-MONOMER 01 (97/3) copolymer
NDP14 =	hydroxyethyl methacrylate, ADS-MONOMER 01 (90/10) copolymer
NDP15 =	hydroxyethyl methacrylate, ADS-MONOMER 01 (80/20) copolymer
NDP16 =	methyl methacrylate, ADS-MONOMER 01 (40/60) copolymer
NDP17 =	methyl methacrylate, ADS-MONOMER 01 (60/40) copolymer
NDP18 =	phenyl methacrylate, ADS-MONOMER 01 (40/60) copolymer
NDP19 =	3-methacryloxypropyltriisopropylsilane, methyl methacrylate, ADS-MONOMER 01 (10/70/20) copolymer
NDP20 =	2-propenoic acid 2-phosphonoxyethyl ester, methyl methacrylate, ADS-MONOMER 01 (2/80/18) copolymer
NDP21 =	acrylic acid, ADS-MONOMER 01 (80/20) copolymer
NDP22 =	4-(2-acryloyloxyethoxy)phenyl 2-hydroxy-2-propyl ketone, methyl methacrylate, ADS-MONOMER 01 (10/70/20) copolymer
NDP23 =	acrylonitrile, methyl methacrylate, ADS-MONOMER 01 (10/70/20) copolymer
NDP24 =	ADS-MONOMER 06, methyl methacrylate, ADS-MONOMER 01 (5/80/15) copolymer
NDP25 =	ADS-MONOMER 07, methyl methacrylate, ADS-MONOMER 01 (3/82/15) copolymer
NDP26 =	methyl methacrylate, ADS-MONOMER 02 (80/20) copolymer
NDP27 =	methyl methacrylate, ADS-MONOMER 03 (80/20) copolymer
NDP28 =	methyl methacrylate, ADS-MONOMER 05 (75/25) copolymer
NDP29 =	methyl methacrylate, ADS-MONOMER 04 (80/20) copolymer
NDP30 =	methyl methacrylate, ADS-MONOMER 01 (ammonium salt) (80/20) copolymer
NDP31 =	methyl methacrylate, ADS-MONOMER 01 (tetramethylammonium salt) (80/20) copolymer
NDP32 =	methyl methacrylate, ADS-MONOMER 01 (tetraethylammonium salt) (80/20) copolymer
NDP33 =	hydroxyethyl methacrylate, ADS-MONOMER 01 (85/15) copolymer
NDP34 =	condensation product of 4-diazodiphenylamine sulphate and formaldehyde
NDP35 =	condensation product of 4-diazodiphenylamine toluene sulphonate and formaldehyde
NDP36 =	condensation product of 4-diazodiphenylamine tetrafluoroborate and formaldehyde

+T1 +HZ,1/32

!+TL,1 NDP01 +32 ? +TL,6 Negalux N18, a diphenylamine diazonium resin from PCAS?

!NDP02 +32 ? diazo resin No. 8 from FAIRMOUNT CHEMICAL?

!NDP03 +32 ? methyl methacrylate, ADS-MONOMER 01 (82/18) copolymer?

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!NDP04 +32 ? homopolymer of ADS-MONOMER 01?
!NDP05 +32 ? hydroxyethylacrylate, ADS-MONOMER 01 (80/20)?
!? copolymer?
!NDP06 +32 ? methyl methacrylate, ADS-MONOMER 01 (80/20)?
!? copolymer?
!NDP07 +32 ? N-isopropyl-acrylamide, ADS-MONOMER 01 (80/20)?
!? copolymer?
!NDP08 +32 ? N-isopropyl-acrylamide, ADS-MONOMER 01 (85/15)?
!? copolymer?
!NDP09 +32 ? N-t-butyl-acrylamide, ADS-MONOMER 01 (75/25)?
!? copolymer?
!NDP10 +32 ? N-t-butyl-acrylamide, ADS-MONOMER 01 (70/30)?
!? copolymer?
!NDP11 +32 ? hydroxyethyl methacrylate, 2-propenoic acid, 2-methyl-, 2-?
!? +8 +55 +8 (2-nitrophenyl)methoxy+9 carbonyl+56 amino+9 ethyl ester, ADS-?
!? MONOMER 01 (85/10/5) terpolymer?
!NDP12 +32 ? hydroxyethyl methacrylate, ADS-MONOMER 01 (95/5)?
!? copolymer?
!NDP13 +32 ? hydroxyethyl methacrylate, ADS-MONOMER 01 (97/3)?
!? copolymer?
!NDP14 +32 ? hydroxyethyl methacrylate, ADS-MONOMER 01 (90/10)?
!? copolymer?
!NDP15 +32 ? hydroxyethyl methacrylate, ADS-MONOMER 01 (80/20)?
!? copolymer?
!NDP16 +32 ? methyl methacrylate, ADS-MONOMER 01 (40/60)?
!? copolymer?
!NDP17 +32 ? methyl methacrylate, ADS-MONOMER 01 (60/40) copolymer?
!NDP18 +32 ? phenyl methacrylate, ADS-MONOMER 01 (40/60) copolymer?
!NDP19 +32 ? 3-methacryloxypropyltriisopropylsilane, methyl?
!? methacrylate, ADS-MONOMER 01 (10/70/20) copolymer?
!NDP20 +32 ? 2-propenoic acid 2-phosphonoxyethyl ester, methyl?
!? methacrylate, ADS-MONOMER 01 (2/80/18) copolymer?
!NDP21 +32 ? acrylic acid, ADS-MONOMER 01 (80/20) copolymer?
!NDP22 +32 ? 4-(2-acryloyloxyethoxy)phenyl 2-hydroxy-2-propyl ketone,?
!? methyl methacrylate, ADS-MONOMER 01 (10/70/20)?
!? copolymer?
!NDP23 +32 ? acrylonitrile, methyl methacrylate, ADS-MONOMER 01?
!? (10/70/20) copolymer?

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!NDP24 +32 ? ADS-MONOMER 06, methyl methacrylate,?
!? ADS-MONOMER 01 (5/80/15) copolymer?
!NDP25 +32 ? ADS-MONOMER 07, methyl methacrylate,?
!? ADS-MONOMER 01 (3/82/15) copolymer?
!NDP26 +32 ? methyl methacrylate, ADS-MONOMER 02 (80/20)?
!? copolymer?
!NDP27 +32 ? methyl methacrylate, ADS-MONOMER 03 (80/20)?
!? copolymer?
!NDP28 +32 ? methyl methacrylate, ADS-MONOMER 05 (75/25)?
!? copolymer?
!NDP29 +32 ? methyl methacrylate, ADS-MONOMER 04 (80/20)?
!? copolymer?
!NDP30 +32 ? methyl methacrylate, ADS-MONOMER 01?
!? (ammonium salt) (80/20) copolymer?
!NDP31 +32 ? methyl methacrylate, ADS-MONOMER 01?
!? (tetramethylammonium salt) (80/20) copolymer?
!NDP32 +32 ? methyl methacrylate, ADS-MONOMER 01?
!? (tetraethylammonium salt) (80/20) copolymer?
!NDP33 +32 ? hydroxyethyl methacrylate, ADS-MONOMER 01 (85/15)?
!? copolymer?
!NDP34 +32 ? condensation product of 4-diazodiphenylamine sulphate and?
!? formaldehyde?
!NDP35 +32 ? condensation product of 4-diazodiphenylamine toluene?
!? sulphonate and formaldehyde?
!NDP36 +32 ? condensation product of 4-diazodiphenylamine?
!? tetrafluoroborate and formaldehyde+TZ,1/32 ?
!+PS

Item character count = 2770

CWU Table Item #: 0232 (1 column)

PQD01 = AZ 7217, a positive working photoresist from CLARIANT
PQD02 = 2-diazo-1-naphthol-5-sulfonic acid sodium salt
PQD03 = 1-diazo-2-naphthol-4-sulfonic acid sodium salt
PQD04 = 2-diazo-1-naphthol-5-(4'-methyl-phenylsulphonate)
PQD05 = 2-diazo-1-naphthol-5-phenylsulphonate
PQD06 = bis(6-diazo-5'-oxy-5'-sulphonate naphthalene)-2,4-
benzophenone
PQD07 = 2-diazo-1-oxy-(2-benzotriazolyl-4'-methyl-phenyl)-5-
sulphonate naphthalene

-continued

PQD08 =	partial esterification product of 1,2-naphthoquinone (2) diazide-5-sulfonyl chloride and a p-t-butylphenol-formaldehyde copolymer
PQD09 =	partial esterification product of 1,2-naphthoquinone diazide-5-sulfonyl chloride and a cresol formaldehyde polymer
PQD10 =	partial esterification product of 1,2-naphthoquinone (2) diazide-5-sulfonylchloride and a p-cresol-formaldehyde resin
PQD11 =	partial esterification product of 1,2-naphthoquinone (2) diazide-5-sulfonyl chloride and a p-t-butylphenol-formaldehyde copolymer

+T1 +HZ, 1/32

!+TL,1 PQD01 +32 ? +TL,7 AZ 7217, a positive working photoresist from CLARIANT?

!PQD02 +32 ? 2-diazo-1-naphthol-5-sulfonic acid sodium salt?

!PQD03 +32 ? 1-diazo-2-naphthol-4-sulfonic acid sodium salt?

!PQD04 +32 ? 2-diazo-1-naphthol-5-(4+40 -methyl-phenylsulphonate)?

!PQD05 +32 ? 2-diazo-1-naphthol-5-phenylsulphonate?

!PQD06 +32 ? bis(6+40 -diazo-5+40 -oxy-5+40 -sulphonate naphthalene)-2,4-?

! ? benzophenone?

!PQD07 +32 ? 2-diazo-1-oxy-(2+40 -benzotriazolyl-4+40 -methyl-phenyl)-5-?

! ? sulphonate naphthalene?

!PQD08 +32 ? partial esterification product of 1,2-naphthoquinone (2)?

! ? diazide-5-sulfonyl chloride and a p-t-butylphenol-?

! ? formaldehyde copolymer?

!PQD09 +32 ? partial esterification product of 1,2-naphthoquinone?

! ? diazide-5-sulfonyl chloride and a cresol formaldehyde?

! ? polymer?

!PQD10 +32 ? partial esterification product of 1,2-naphthoquinone (2)?

! ? diazide-5-sulfonylchloride and a p-cresol-formaldehyde?

! ? resin?

!PQD11 +32 ? partial esterification product of 1,2-naphthoquinone (2)?

! ? diazide-5-sulfonyl chloride and a p-t-butylphenol-?

! ? formaldehyde copolymer+TZ,1/32 ?

!+PS

Item character count = 999

CWU Table Item #: 0272 (1 column)

Support nr.	Composition
01	subbing layer consisting of 79.1% LATEX01; 18.6% KIESELSOL™ 100F; 0.5% MERSOLAT™ H; and 1.9% ULTRAVON™ W
02	surface treated with a corona discharge
03	surface treated with an glow discharge
04	subbing layer consisting of a first layer of 79.1% LATEX01; 18.6% KIESELSOL™ 100F; 0.5% MERSOLAT™ H; and 1.9% ULTRAVON™ W; and an outermost layer consisting of 49% gelatin, 44% KIESELSOL™ 300F, 1.72% ULTRAVON™ W, 0.86% ARKOPAL™ N060, 2.86% hexylene glycol, 1.43% trimethylol propane and 0.13% polymethyl methacrylate, a 3 μ m matting agent.
05	subbing layer consisting of 77.2% of LATEX02; 5.8% of LATEX03; 1.3% HORDAMER™ PE02 and 14.6% PAREZ RESIN™ 613.
06	subbing layer consisting of a first layer of 85.6% of LATEX01, 9.5% of KTESELSOL™ 100F, 2.5% of PEDOT/PSS, 0.5% of MERSOLAT™ 76H and 1.9% ULTRAVON™ W; and an outermost layer consisting of 49% gelatin, 44% KIESELSOL™ 300F, 1.72% ULTRAVON™ W, 0.86% ARKOPAL™ N060, 2.86% 2-methyl-2,4-pentanediol, 1.43% trimethylol propane and 0.13% polymethyl methacrylate 3 μ m matting agent.
07	subbing layer consisting of 79.8% LATEX02; 19.9% KIESELSOL™ 100F; and 0.3% ARKOPON™ T
08	subbing layer consisting of 75.0% LATEX01, 9.0% LATEX03 and 16.0% KIESELSOL™ 100F

+T1 +HZ, 1/32

!+HC,1 Support? +HL,6 ?

!nr.? Composition+HZ,1/32 ?

!+TC,1 01? +TL,6 subbing layer consisting of 79.1% LATEX01; 18.6%?

!? KIESELSOL+12 +198 +0 100F; 0.5% MERSOLAT+12 +198 +0 H;?

!? and 1.9% ULTRAVON+12 +198 +0 W?

!02? surface treated with a corona discharge?

!03? surface treated with an glow discharge?

!04? subbing layer consisting of a first layer of 79.1%?

!? LATEX01; 18.6% KIESELSOL+12 +198 +0 100F;?

!? 0.5% MERSOLAT+12 +198 +0 H; and 1.9% ULTRAVON+12 +198 +0 W;?

!? and an outermost layer consisting of 49% gelatin,?

!? 44% KIESELSOL+12 +198 +0 300F, 1.72% ULTRAVON+12 +198 +0 W,?

!? 0.86% ARKOPAL+12 +198 +0 N060, 2.86% hexylene glycol, 1.43%?

!? trimethylol propane and 0.13% polymethyl methacrylate, a?

!? 3 +82 m matting agent.?

!05? subbing layer consisting of 77.2% of LATEX02; 5.8% of?

!? LATEX03; 1.3% HORDAMER+12 +198 +0 PE02?

!? and 14.6% PAREZ RESIN+12 +198 +0 613.?

!06? subbing layer consisting of a first layer of 85.6% of?

!? LATEX01, 9.5% of KTESELSOL+12 +198 +0 100F,?

!? 2.5% of PEDOT/PSS, 0.5% of MERSOLAT+12 +198 +0 76H and?

!? 1.9% ULTRAVON+12 +198 +0 W; and an?

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! ? outermost layer consisting of 49% gelatin, 44%?
! ? KIESELSOL+12 +198 +0 300F, 1.72% ULTRAVON+12 +198 +0 W,?
! ? 0.86% ARKOPAL+12 +198 +0 N060, 2.86% 2-methyl-2,4-pentanediol?
! ? 1.43% trimethylol propane and 0.13% polymethyl methacrylate?
! ? 3 +82 m matting agent.?
!07? subbing layer consisting of 79.8% LATEX02; 19.9%?
! ? KIESELSOL+12 +198 +0 100F; and 0.3% ARKOPON+12 +198 +0 T?
!08? subbing layer consisting of 75.0% LATEX01,?
! ? 9.0% LATEX03 and 16.0% KIESELSOL+12 +198 +0 100F+TZ, 1/32 ?
!+PS

Item character count = 1305

CWU Table Item #: 0331 (2 columns)

TABLE 7

INGREDIENT [g]	SAMPLE					
	XXV	XXVI	XXVII	XXVIII	XXIX	XXX
1.2% aq. PEDOT/PSS dispersion	16.7	16.7	16.7	16.7	16.7	16.7
2% aq. sol. of ZONYL™ FSO 100	0.50	0.50	0.50	0.50	0.50	0.50
N-methyl-pyrrolidinone	2.50	2.50	2.50	2.50	2.50	2.50
2.5% aqueous NH ₄ OH solution	0.45	0.45	0.45	0.45	0.45	0.45
15.16% aq. solution of NDP06	0.66	—	—	—	—	—
17.03% aq. solution of NDP07*	—	0.59	—	—	—	—
18.34% aq. solution of NDP08*	—	—	0.54	—	—	—
16.8% aq. solution of NDP09*	—	—	—	0.59	—	—
17.39% aq. solution of NDP10*	—	—	—	—	0.57	—
16.63% aq. solution of NDP11*	—	—	—	—	—	0.60
deionized water	29.19	29.26	29.31	29.26	29.28	29.25
COVERAGE						
PEDOT/PSS [mg/m ²]	200	200	200	200	200	200
NDP06 [mg/m ²]	100	—	—	—	—	—
NDP07 [mg/m ²]	—	100	—	—	—	—
NDP08 [mg/m ²]	—	—	100	—	—	—
NDP09 [mg/m ²]	—	—	—	100	—	—
NDP10 [mg/m ²]	—	—	—	—	100	—
NDP11 [mg/m ²]	—	—	—	—	—	100
ZONYL FSO 100 [mg/m ²]	8	8	8	8	8	8

*solution in water/isopropanol 40/60 by volume

+T2 TABLE 7+HZ, 1/41

+HC, 17 +UZ, 17/41 SAMPLE?

+HC, 17 XXV? +HC, 21 XXVI? +HC, 25 XXVII? +HC, 29 XXVIII? +HC, 33 XXIX? +HC, 37 XXX+HZ, 1/41

?

+TL, 1 +UZ, 1/9 INGREDIENT +8 g+9 ? +TA, 17 ? +TA, 21 ? +TA, 25 ? +TA, 29 ? +TA, 33 ? +TA, 37

?

! 1.2% aq. PEDOT/PSS dispersion? 16.7? 16.7? 16.7? 16.7? 16.7? 16.7?

! 2% aq. sol. of ZONYL+12 +198 +0 FSO 100? 0.50? 0.50? 0.50? 0.50? 0.50? 0.50?

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!N-methyl-pyrrolidinone? 2.50? 2.50? 2.50? 2.50? 2.50? 2.50?
!2.5% aqueous NH+HD 4+L OH solution? 0.45? 0.45? 0.45? 0.45? 0.45? 0.45?
!15.16% aq. solution of NDP06? 0.66? +13 ? +13 ? +13 ? +13 ? +13 ?
!17.03% aq. solution of NDP07*? +13 ? 0.59? +13 ? +13 ? +13 ? +13 ?
!18.34% aq. solution of NDP08*? +13 ? +13 ? 0.54? +13 ? +13 ? +13 ?
!16.8% aq. solution of NDP09*? +13 ? +13 ? +13 ? 0.59? +13 ? +13 ?
!17.39% aq. solution of NDP10*? +13 ? +13 ? +13 ? +13 ? 0.57? +13 ?
!16.63% aq. solution of NDP11*? +13 ? +13 ? +13 ? +13 ? +13 ? 0.60?
!deionized water? 29.19? 29.26? 29.31? 29.26? 29.28? 29.25?
!+UZ, 1/7 COVERAGE?
!PEDOT/PSS +8 mg/m+HU 2+L +9 ? 200? 200? 200? 200? 200?
!NDP06 +8 mg/m+HU 2+L +9 ? 100? +13 ? +13 ? +13 ? +13 ? +13 ?
!NDP07 +8 mg/m+HU 2+L +9 ? +13 ? 100? +13 ? +13 ? +13 ? +13 ?
!NDP08 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? 100? +13 ? +13 ? +13 ?
!NDP09 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? +13 ? 100? +13 ? +13 ?
!NDP10 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? +13 ? +13 ? 100? +13 ?
!NDP11 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? +13 ? +13 ? +13 ? 100?
!ZONYL FSO 100 +8 mg/m+HU 2+L +9 ? 8? 8? 8? 8? 8? 8+TZ, 1/41 ?
!+L6 *solution in water/isopropanol 40/60 by volume
!+PS

Item character count = 983

CWU Table Item #: 0344 (2 columns)

TABLE 8

PROPERTY	SAMPLE					
	XXV	XXVI	XXVII	XXVIII	XXIX	XXX
R_s (Ω/square) of coated layer before patterning	3.2×10^3	4.5×10^3	3.4×10^3	3.8×10^3	3.2×10^3	2.9×10^3
R_s (Ω/square) of non-exposed areas after exposure and processing	$>4.0 \times 10^7$					
R_s (Ω/square) of exposed areas after exposure and processing	1.5×10^4	1.8×10^4	1.5×10^4	1.5×10^4	1.0×10^4	1.2×10^4
R_s ratio non-exposed/ exposed areas	>2700	>2200	>2700	>2700	>4000	>3300

+T2 TABLE 8+HZ, 1/41

+HC, 11 +UZ, 11/41 SAMPLE?

+HL, 1 PROPERTY? +HL, 11 XXV? +HL, 16 XXVI? +HL, 21 XXVII? +HL, 26 XXVIII? +HL, 31 XXIX?

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+HL,36 XXX+HZ,1/41 ?

!+TL,1 R+HD s+L (+106 /square) of coated? +TL,11 3.2 +33 +0 10+HU 3? +TL,16 4.5 +33 +0 10+HU 3? +TL,21 3.4 +33 +0 10+HU 3? +TL,26 3.8 +33 +0 10+HU 3? +TL,31 3.2 +33 +0 10+HU 3? +TL,36 2.9 +33 +0 10+HU 3?

!layer before patterning?

!R+HD s+L (+106 /square) of non-? +22 4.0 +33 +0 10+HU 7? +22 4.0 +33 +0 10+HU 7?

!exposed areas after?

!exposure and?

!processing?

!R+HD s+L (+106 /square) of? 1.5 +33 +0 10+HU 4? 1.8 +33 +0 10+HU 4? 1.5 +33 +0 10+HU 4? 1.5 +33 +0 10+HU 4? 1.0 +33 +0 10+HU 4? 1.2 +33 +0 10+HU 4?

!exposed?

!areas after?

!exposure?

!and processing?

!R+HD s +L ratio non-exposed/? +22 2700? +22 2200? +22 2700? +22 2700? +22 4000? +22 3300?

!exposed areas+TZ,1/41 ?

!+PS

Item character count = 547

CWU Table Item #: 0346 (1 column)

TABLE 9

<u>INGREDIENT</u>	<u>SAMPLE</u>			
	<u>XXXI</u>	<u>XXXII</u>	<u>XXXIII</u>	<u>XXXIV</u>
1.2% aq. dispersion of PEDOT/PSS	16.7	16.7	16.7	16.7
2% aq. solution of ZONYL™ PSO 100	0.50	0.50	0.50	0.50
N-methyl-pyrrolidinone	2.50	2.50	2.50	2.50
2.5% aqueous NH ₄ OH solution	0.45	0.45	0.45	0.45
15.16% aq. solution of NDP06	0.66	—	—	—
15.9% aq. solution of NDP12*	—	0.63	—	—
15.9% aq. solution of NDP13*	—	—	0.63	—
15.9% aq. solution of NDP14*	—	—	—	0.63
deionized water	29.19	29.22	29.22	29.22
<u>COVERAGE</u>				
PEDOT/PSS [mg/m ²]	200	200	200	200
NDP06 [mg/m ²]	100	—	—	—
NDP12 [mg/m ²]	—	100	—	—

TABLE 9-continued

<u>composition of the coating dispersions</u>			
<u>SAMPLE</u>			
	XXXI	XXXII	XXXIII
NDP13 [mg/m ²]	—	—	100
NDP14 [mg/m ²]	—	—	—
ZONYL PSO 100 [mg/m ²]	8	8	8
XXXIV			8

*solution in water/isopropanol 40/60 by volume

+T1 TABLE 9+HZ, 1/32

!+HC, 1 +UZ, 8/25 composition of the coating dispersions?

!+HC, 15 +UZ, 15/32 SAMPLE?

!+HC, 15 XXXI? +HC, 19 XXXII? +HC, 23 XXXIII? +HC, 28 XXXIV+HZ, 1/32 ?

!+TL, 1 +UZ, 1/8 INGREDIENT? +TA, 15 ? +TA, 19 ? +TA, 23 ? +TA, 28 ?

!1.2% aq. dispersion of? 16.7? 16.7? 16.7? 16.7?

!PEDOT/PSS?

!2% aq. solution of? 0.50? 0.50? 0.50? 0.50?

!ZONYL+12 +198 +0 PSO 100?

!N-methyl-pyrrolidinone? 2.50? 2.50? 2.50? 2.50?

!2.5% aqueous NH+HD 4+L OH solution? 0.45? 0.45? 0.45? 0.45?

!15.16% aq. solution of NDP06? 0.66? +13 ? +13 ? +13 ?

!15.9% aq. solution of NDP12*? +13 ? 0.63? +13 ? +13 ?

!15.9% aq. solution of NDP13*? +13 ? +13 ? 0.63? +13 ?

!15.9% aq. solution of NDP14*? +13 ? +13 ? +13 ? 0.63?

!deionized water? 29.19? 29.22? 29.22? 29.22?

+UZ, 1/7 COVERAGE?

!PEDOT/PSS +8 mg/m+HU 2+L +9 ? 200? 200? 200? 200?

!NDP06 +8 mg/m+HU 2+L +9 ? 100? +13 ? +13 ? +13 ?

!NDP12 +8 mg/m+HU 2+L +9 ? +13 ? 100? +13 ? +13 ?

!NDP13 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? 100? +13 ?

!NDP14 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? +13 ? 100?

!ZONYL PSO 100 +8 mg/m+HU 2+L +9 ? 8? 8? 8? 8+TZ, 1/32 ?

+L6 *solution in water/isopropanol 40/60 by volume

+PS

Item character count = 765

TABLE 10

PROPERTY	SAMPLE			
	XXXI	XXXII	XXXIII	XXXIV
R_s (Ω /square) of coated layer before patterning	2.8×10^3	1.9×10^3	1.6×10^3	1.8×10^3
R_s (Ω /square) of non-exposed areas after exposure and processing	$>4.0 \times 10^7$	$>4.0 \times 10^7$	$>4.0 \times 10^7$	1.6×10^8
R_s (Ω /square) of exposed areas after exposure and processing	1.0×10^4	3.6×10^3	4.5×10^3	4.2×10^3
Resistance ratio non-exposed/exposed areas	$>4 \times 10^3$	$>1.1 \times 10^3$	$>9 \times 10^3$	3.8×10^4
Optical resolution of lines [μm]	8	4	40	4
Optical resolution of spaces [μm]	>70	6	6	6

+T1 TABLE 10+HZ, 1/32

!+HC, 12 +UZ, 12/32 SAMPLE?

!+HL, 1 PROPERTY? +HL, 12 XXXI? +HL, 17 XXXII? +HL, 22 XXXIII? +HL, 27 XXXIV+HZ, 1/32 ?

!+TL, 1 R+HD s+L (+106 /square) of coated? +TL, 12 2.8 +33 +0 10+HU 3? +TL, 17 1.9 +33 +0 10+HU 3? +TL, 22 1.6 +33 +0 10+HU 3? +TL, 27 1.8 +33 +0 10+HU 3?

!layer before patterning?

!R+HD s+L (+106 /square) of non-? +22 4.0 +33 +0 10+HU 7? +22 4.0 +33 +0 10+HU 7? +22 4.0 +33 +0 10+HU 7? 1.6 +33 +0 10+HU 8?

!exposed areas after?

!exposure and processing?

!R+HD s+L (+106 /square) of exposed? 1.0 +33 +0 10+HU 4? 3.6 +33 +0 10+HU 3? 4.5 +33 +0 10+HU 3? 4.2 +33 +0 10+HU 3?

!areas after exposure and?

!processing?

!Resistance ratio non-? +22 4 +33 +0 10+HU 3? +22 1.1 +33 +0 10+HU 3? +22 9 +33 +0 10+HU 3? 3.8 +33 +0 10+HU 4?

!exposed/exposed areas?

!Optical resolution of? 8? 4? 40? 4?

!lines +8 +82 m+9 ?

!Optical resolution of? +22 70? 6? 6? 6?

!spaces +82 m+9 +TZ, 1/32 ?

!+PS

Item character count = 567

TABLE 11

INGREDIENT [g]	SAMPLE					
	XXXV	XXXVI	XXXVII	XXXVIII	XXXIX	XL
1.2% aq. PEDOT/PSS dispersion	16.7	16.7	16.7	16.7	16.7	16.7
2% aq. sol. ZONYL™ FSO 100	0.50	0.50	0.50	0.50	0.50	0.50
2.5% aqueous NH ₄ OH solution	0.50	0.50	0.50	0.50	0.50	0.50
15.9% solution of NDP15*	0.63	—	—	—	—	—
17.6% solution of NDP20*	—	0.57	—	—	—	—
17.4% solution of NDP21*	—	—	0.58	—	—	—
14.02% solution of NDP23*	—	—	—	0.72	—	—
14.36% solution of NDP27*	—	—	—	—	0.70	—
18.81% solution of NDP32*	—	—	—	—	—	0.53
deionized water	31.67	31.73	31.72	31.58	31.60	31.77
<u>COVERAGE</u>						
PEDOT/PSS [mg/m ²]	200	200	200	200	200	200
NDP15 [mg/m ²]	100	—	—	—	—	—
NDP20 [mg/m ²]	—	100	—	—	—	—
NDP21 [mg/m ²]	—	—	100	—	—	—
NDP23 [mg/m ²]	—	—	—	100	—	—
NDP27 [mg/m ²]	—	—	—	—	100	—
NDP32 [mg/m ²]	—	—	—	—	—	100
ZONYL FSO 100 [mg/m ²]	8	8	8	8	8	8

*solution in water/isopropanol 40/60 by volume

+T2 TABLE 11+HZ, 1/44

!+HC, 1 +UZ, 14/31 composition of the coating dispersions?

!+HC, 18 +UZ, 18/44 SAMPLE?

!+HC, 18 XXXV? +HC, 22 XXXVI? +HC, 26 XXXVII? +HC, 31 XXXVIII? +HC, 36 XXXIX? +HC, 40
XL+HZ, 1/44 ?!+TL, 1 +UZ, 1/9 INGREDIENT +8 g+9 ? +TA, 18 ? +TA, 22 ? +TA, 26 ? +TA, 31 ? +TA, 36 ? +TA, 40
?

!1.2% aq. PEDOT/PSS dispersion? 16.7? 16.7? 16.7? 16.7? 16.7? 16.7?

!2% aq. sol. ZONYL+12 +198 +0 FSO 100? 0.50? 0.50? 0.50? 0.50? 0.50? 0.50?

!2.5% aqueous NH+HD 4+L OH solution? 0.50? 0.50? 0.50? 0.50? 0.50? 0.50?

!15.9% solution of NDP15*? 0.63? +13 ? +13 ? +13 ? +13 ? +13 ?

!17.6% solution of NDP20*? +13 ? 0.57? +13 ? +13 ? +13 ? +13 ?

!17.4% solution of NDP21*? +13 ? +13 ? 0.58? +13 ? +13 ? +13 ?

!14.02% solution of NDP23*? +13 ? +13 ? +13 ? 0.72? +13 ? +13 ?

!14.36% solution of NDP27*? +13 ? +13 ? +13 ? +13 ? 0.70? +13 ?

!18.81% solution of NDP32*? +13 ? +13 ? +13 ? +13 ? +13 ? 0.53?

!deionized water? 31.67? 31.73? 31.72? 31.58? 31.60? 31.77?

!+UZ, 1/7 COVERAGE?

!PEDOT/PSS +8 mg/m+HU 2+L +9 ? 200? 200? 200? 200? 200?

!NDP15 +8 mg/m+HU 2+L +9 ? 100? +13 ? +13 ? +13 ? +13 ? +13 ?

!NDP20 +8 mg/m+HU 2+L +9 ? +13 ? 100? +13 ? +13 ? +13 ? +13 ?

!NDP21 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? 100? +13 ? +13 ? +13 ?

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!NDP23 +8 mg/m²HU 2+L +9 ? +13 ? +13 ? +13 ? 100? +13 ? +13 ?
!NDP27 +8 mg/m²HU 2+L +9 ? +13 ? +13 ? +13 ? +13 ? 100? +13 ?
!NDP32 +8 mg/m²HU 2+L +9 ? +13 ? +13 ? +13 ? +13 ? +13 ? 100?
!ZONYL FSO 100 +8 mg/m²HU 2+L +9 ? 8? 8? 8? 8? 8? 8+TZ,1/44 ?
!+L6 *solution in water/isopropanol 40/60 by volume
!+PS

Item character count = 948

CWU Table Item #: 0371 (2 columns)

TABLE 12

PROPERTY	SAMPLE					
	XXXV	XXXVI	XXXVII	XXXVIII	XXXIX	XL
processing liquid	B	B	B	A	A	A
R _s (Ω/square) of coated layer before patterning	7.5 × 10 ⁶	3.4 × 10 ⁶	1.9 × 10 ⁶	4.5 × 10 ⁶	6.5 × 10 ⁶	8.0 × 10 ⁶
R _s (Ω/square) of non-exposed areas after exposure and processing	>4.0 × 10 ⁷	>4.0 × 10 ⁷	8.6 × 10 ⁶	>4.0 × 10 ⁷	>4.0 × 10 ⁷	>4.0 × 10 ⁷
R _s (Ω/square) of exposed areas after exposure and processing	4.5 × 10 ⁶	2.1 × 10 ⁶	8.2 × 10 ⁶	5.7 × 10 ⁶	2.7 × 10 ⁶	4.0 × 10 ⁶
R _s ratio non-exposed/exposed areas	>8.9	>19.0	1.0	>7.0	>14.8	>10
Optical resolution of lines [μm]	4	4	4	4	4	4
Optical resolution of spaces [μm]	6	6	6	6	6	4
R _s (Ω/square) of non-exposed areas after processing and enhancement	9.0 × 10 ⁸	1.2 × 10 ⁹	1.1 × 10 ⁷	4.3 × 10 ¹²	5.4 × 10 ¹⁰	4.5 × 10 ¹²
R _s (Ω/square) of exposed areas after exposure, processing and enhancement	9.1 × 10 ³	9.5 × 10 ³	2.7 × 10 ⁴	3.8 × 10 ⁴	4.0 × 10 ³	5.9 × 10 ³
R _s ratio non-exposed/exposed areas after enhancement	9.9 × 10 ⁴	1.3 × 10 ⁵	400	1.13 × 10 ⁸	1.35 × 10 ⁷	7.6 × 10 ⁸

+T2 TABLE 12+HZ,1/42

+HC,12 +UZ,12/42 SAMPLE?

+HL,1 PROPERTY? +HL,12 XXXV? +HL,17 XXXVI? +HL,22 XXXVII? +HL,27 XXXVIII? +HL,32 XXXIX?

+HL,37 XL+HZ,1/42 ?

+TL,1 processing liquid? +TL,12 B? +TL,17 B? +TL,22 B? +TL,27 A? +TL,32 A? +TL,37 A?

+R+HD s+L (+106 /square) of coated? 7.5 +33 +0 10+HU 6? 3.4 +33 +0 10+HU 6? 1.9 +33 +0 10+HU 6? 4.5 +33 +0 10+HU 6? 6.5 +33 +0 10+HU 6? 8.0 +33 +0 10+HU 6?

!layer before patterning?

+R+HD s+L (+106 /square) of non-? +22 4.0 +33 +0 10+HU 7? +22 4.0 +33 +0 10+HU 7? 8.6 +33 +0 10+HU 6? +22 4.0 +33 +0 10+HU 7? +22 4.0 +33 +0 10+HU 7? +22 4.0 +33 +0 10+HU 7?

!exposed areas after?

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!exposure and processing?

!R+HD s+L (+106 /square) of exposed? 4.5 +33 +0 10+HU 6? 2.1 +33 +0 10+HU 6? 8.2 +33 +0 10+HU 6? 5.7 +33 +0 10+HU 6? 2.7 +33 +0 10+HU 6? 4.0 +33 +0 10+HU 6?

!areas after exposure and?

!processing?

!R+HD s +L ratio non-exposed/? +22 8.9? +22 19.0? 1.0? +22 7.0? +22 14.8? +22 10?

!exposed areas?

!Optical resolution of? 4? 4? 4? 4? 4? 4?

!lines +8 +82 m+9 ?

!Optical resolution of? 6? 6? 6? 6? 6? 4?

!spaces +8 +82 m+9 ?

!R+HD s+L (+106 /square) of non-? 9.0 +33 +0 10+HU 8? 1.2 +33 +0 10+HU 9? 1.1 +33 +0 10+HU 7? 4.3 +33 +0 10+HU 12? 5.4 +33 +0 10+HU 10? 4.5 +33 +0 10+HU 12?

!exposed areas after?

!processing and?

!enhancement?

!R+HD s+L (+106 /square) of exposed? 9.1 +33 +0 10+HU 3? 9.5 +33 +0 10+HU 3? 2.7 +33 +0 10+HU 4? 3.8 +33 +0 10+HU 4? 4.0 +33 +0 10+HU 3? 5.9 +33 +0 10+HU 3?

!areas after exposure,?

!processing and?

!enhancement?

!R+HD s +L ratio non-? 9.9 +33 +0 10+HU 4? 1.3 +33 +0 10+HU 5? 400? 1.13 +33 +0 10+HU 8? 1.35 +33 +0 10+HU 7? 7.6 +33 +0 10+HU 8?

!exposed/exposed areas?

!after enhancement+TZ,1/42 ?

!+PS

Item character count = 1076

CWU Table Item #: 0392 (1 column)

TABLE 13

<u>composition of PEDOT/PSS-containing coating dispersions</u>		
	<u>SAMPLE</u>	
	XLI	XLII
INGREDIENT [g]		
1.2% aqueous dispersion of PEDOT/PSS	125	500
Z6040	1.0	1.0
2% aqueous solution of ZONYL™ FSO 100	1.5	1.5

TABLE 13-continued

<u>composition of PEDOT/PSS-containing coating dispersions</u>		
	<u>SAMPLE</u>	
	XLI	XLII
N-methyl-pyrrolidinone	50	50
deionized water	825	450
COVERAGE [mg/m ²]		
PEDOT/PSS	100	400
ZONYL™ FSO 100	2	8

+T1 TABLE 13+HZ,1/32

!+HC,1 +UZ,4/29 composition of PEDOT/PSS-containing coating dispersions?

!+HC,23 +UZ,23/32 SAMPLE?

!+HC,23-XLF? +HC,26 XLIII+HZ,1/32 ?

!+TL,3 +UZ,1/9 INGREDIENT +8 g+9 ? +TA,23 ? +TA,26 ?

!1.2% aqueous dispersion of PEDOT/PSS? 125? 500?

!Z6040? 1.0? 1.0?

!2% aqueous solution of ZONYL+12 +198 +0 FSO 100? 1.5? 1.5?

!N-methyl-pyrrolidinone? 50? 50?

!deionized water? 825? 450?

!+UZ,3/13 COVERAGE +8 mg/m+HU 2+L +9 ?

!PEDOT/PSS? 100? 400?

!ZONYL+12 +198 +0 FSO 100? 2? 8+TZ,1/32 ?

!+PS

Item character count = 342

Folder character count = 10302

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CWU Table Item #: 0393 (1 column)

TABLE 14

<u>composition of the coating dispersions</u>	
INGREDIENT	SAMPLE XLIII
1.2% aqueous dispersion of PEDOT/PSS	300
PQD01	100
1% aqueous solution of ZONYL™ FSO 100	40
N-methyl-pyrrolidinone	560

+T1 TABLE 14+HZ, 1/32

!+HC, 1 +UZ, 8/25 composition of the coating dispersions?

!+HL, 3 ? +HC, 22 SAMPLE?

! INGREDIENT? XLIII+HZ, 1/32 ?

!+TL, 3 1.2% aqueous dispersion of PEDOT/PSS? +TA, 22 300?

? PQD01? 100?

? 1% aqueous solution of ZONYL+12 +198 +0 FSO 100? 40?

? N-methyl-pyrrolidinone? 560+TZ, 1/32 ?

? +PS

Item character count = 211

CWU Table Item #: 0421 (1 column)

TABLE 17

INGREDIENT [g]	SAMPLE		
	LI (COMP)	LII	LIII
1.2% aq. PEDOT/PSS dispersion	41.7	41.7	41.7
2% aq. sol. of ZONYL™ FSO 100	1	1	1
N-methyl-pyrrolidinone	—	—	—
BADS01	—	0.125	0.25
2.5% aqueous NH ₄ OH solution	2.28	2.48	2.33
deionized water	55.02	54.70	54.72
<u>COVERAGE</u>			
PEDOT/PSS [mg/m ²]	200	200	200
BADS01 [mg/m ²]	—	50	100
ZONYL™ FSO 100 [mg/m ²]	8	8	8

+T1 TABLE 17+HZ, 1/32

!+HC, 17 +UZ, 17/32 SAMPLE?

!+HC, 17 LI (COMP)? +HC, 24 LII? +HC, 28 LIII+HZ, 1/32 ?

!+TL, 1 +UZ, 1/9 INGREDIENT +8 g+9 ?

!+TL, 1 1.2% aq. PEDOT/PSS dispersion? +TA, 17 41.7? +TA, 24 41.7? +TA, 28 41.7?

? 2% aq. sol. of ZONYL+12 +198 +0 FSO 100? 1? 1? 1?

? N-methyl-pyrrolidinone? +TC +13 ? +TC +13 ? +TC +13 ?

? BADS01? +13 ? +TA 0.125? +TA 0.25?

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!2.5% aqueous NH₄HD 4+L OH solution? +TA 2.28? 2.48? 2.33?

?deionized water? 55.02? 54.70? 54.72?

?+UZ, 1/7 COVERAGE?

?PEDOT/PSS +8 mg/m²+HU 2+L +9 ? 200? 200? 200?

?BADS01 +8 mg/m²+HU 2+L +9 ? +TC +13 ? 50? 100?

?ZONYL+12 +198 +0 FSO 100 +8 mg/m²+HU 2+L +9 ? +TA 8? 8? 8+TZ, 1/32 ?

?+PS

Item character count = 397

CWU Table Item #: 0431 (1 column)

TABLE 18

	SAMPLE		
	LI (COMP)	LII	LIII
R_s of non-exposed layer un-rinsed with water [Ω/square]	3.2×10^6	1.4×10^6	6.3×10^4
R_s of non-exposed layer rinsed with water [Ω/square]	1.5×10^{10}	7.1×10^{11}	2.0×10^{14}
R_s of exposed layer un-rinsed with water [Ω/square]	3.0×10^6	4.8×10^6	4.5×10^5
R_s of exposed layer rinsed with water [Ω/square]	7.9×10^{14} *	2.0×10^6	4.5×10^5
R_s ratio for exposed layer to un-exposed layer after rinsing with water	—	3.6×10^5	4.4×10^8
Optical resolution [μm] bubbles in surface of large exposed areas	none —	4-6 yes	4-6 yes
surface resistivity of exposed layer treated with water [Ω/square] and conductivity enhanced	—	1.4×10^3	2.1×10^3

*exposed layer removed

+T1 TABLE 18+HZ, 1/32

?+HC, 14 +UZ, 14/32 SAMPLE?

?+HC, 14 LI (COMP)? +HC, 20 LII? +HC, 26 LIII+HZ, 1/32 ?

?+TL, 1 R+HD s +L of non-exposed layer un-? +TC, 14 3.2 +33 +0 10+HU 6? +TC, 20 1.4 +33 +0 10+HU 6? +TC, 26 6.3 +33 +0 10+HU 4?

?rinsed with water +8 +106 /square+9 ?

?R+HD s +L of non-exposed layer rinsed? +HU +11 +L 1.5 +33 +0 10+HU 10? +HU +11 +L 7.1 +33 +0 10+HU 11? +HU +11 +L 2.0 +33 +0 10+HU 14?

?with water +8 +106 /square+9 ?

?R+HD s +L of exposed layer un-rinsed? 3.0 +33 +0 10+HU 6? 4.8 +33 +0 10+HU 6? 4.5 +33 +0 10+HU 5?

?with water +8 +106 /square+9 ?

?R+HD s +L of exposed layer rinsed? +HU +11 +11 +L 7.9 +33 +0 10+HU 14*? 2.0 +33 +0 10+HU 6? 4.5 +33 +0 10+HU 5?

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!with water +8 +106 /square+9 ?

!R+HD s +L ratio for exposed layer to? +13 ? 3.6 +33 +0 10+HU 5? 4.4 +33 +0 10+HU 8?

!unexposed layer after rinsing?

!with water?

!Optical resolution +8 +82 m+9 ? none? 4+14 6? 4+14 6?

!bubbles in surface of large? +13 ? yes? yes?

!exposed areas?

!surface resistivity of exposed? +13 ? 1.4 +33 +0 10+HU 3? 2.1 +33 +0 10+HU 3?

!layer treated with water?

!+8 +106 /square+9 +0 and conductivity?

!enhanced+TZ,1/32 ?

!+L6 *exposed layer removed

!+PS

Item character count = 765

CWU Table Item #: 0441 (1 column)

TABLE 19

<u>INGREDIENT [g]</u>	<u>SAMPLE</u>			
	LIV	LV	LVI	LVII
1.2% aq. dispersion of PEDOT/PSS	16.7	16.7	16.7	16.7
1% solution of BADS01	7.5	—	—	—
1% solution of BADS03	—	7.5	9.0	10.0
2.5% aqueous NH ₄ OH solution	1.1	1.0	0.8	1.0
15.9% solution of NDP33 in water/isopropanol 40/60 by volume	0.16	0.16	0.38	—
2% aq. solution of ZONYL™ FSO 100	0.5	0.5	0.5	0.5
N-methyl-pyrrolidinone	—	—	—	—
deionized water	24.04	24.14	22.63	21.8
pH	3.71	3.85	3.65	3.67
<u>COVERAGE [mg/m²]</u>				
PEDOT/PSS	200	200	200	200
BADS01	75	—	—	—
BADS03	—	75	90	100
NDP33	25	25	60	—
ZONYL FSO 100	10	10	10	10

+T1 TABLE 19+HZ,1/32

!+HC,1 +UZ,8/25 composition of the coating dispersions?

!+HC,16 +UZ,16/32 SAMPLE?

!+HC,16 LIV? +HC,20 LV? +HC,24 LVI? +HC,28 LVII+HZ,1/32 ?

!+TL,1 +UZ,1/9 INGREDIENT +8 g+9 ?

!+TL,1 1.2% aq. dispersion of PEDOT/? +TA,16 16.7? +TA,20 16.7? +TA,24 16.7? +TA,28

16.7?

!PSS?

!1% solution of BADS01? 7.5? +TC +13 ? +TC +13 ? +TC +13 ?

!1% solution of BADS03? +TC +13 ? +TA 7.5? +TA 9.0? +TA 10.0?

!2.5% aqueous NH₄OH solution? +TA 1.1? 1.0? 0.8? 1.0?

!15.9% solution of NDP33 in? 0.16? 0.16? 0.38? +TC +13 ?

!water/isopropanol 40/60 by volume?

!2% aq. solution of ZONYL+12 +198 ? 0.5? 0.5? 0.5? +TA 0.5?

!FSO 100?

!N-methyl-pyrrolidinone? +TC +13 ? +TC +13 ? +TC +13 ? +TC +13 ?

!deionized water? +TA 24.04? +TA 24.14? +TA 22.63? +TA 21.8?

!pH? 3.71? 3.85? 3.65? 3.67?

!+UZ,1/11 COVERAGE +8 mg/m² 2+L +9 ?

!PEDOT/PSS? 200? 200? 200? 200?

!BADS01? 75? +TC +13 ? +TC +13 ? +TC +13 ?

!BADS03? +TC +13 ? +TA 75? +TA 90? +TA 100?

!NDP33? +TA 25? 25? 60? +TC +13 ?

!ZONYL FSO 100? 10? 10? 10? +TA 10+TZ,1/32 ?

!+PS

Item character count = 671

CWU Table Item #: 0451 (1 column)

TABLE 21

composition of the coating dispersions

INGREDIENT [g]	SAMPLE				
	LVIII	LIX	LX	LXI	LXII
1.2% aq. dispersion of PEDOT/PSS	41.7	41.7	41.7	41.7	41.7
2% aq. solution of ZONYL™ FSO 100	1	1	1	1	1
BADS01	0.125	0.15	0.175	0.2	0.225
15.9% sol. of NDP15 in water/isopropanol (40/60 by volume)	7.86	6.3	4.7	3.14	1.471
N-methyl-pyrrolidinone	—	—	—	—	—
2.5% aqueous NH ₄ OH solution	1.24	1.24	1.24	1.24	1.24
deionized water	48.08	49.16	51.19	52.72	54.36
pH	3.25	3.34	3.38	3.1	3.28
<u>COVERAGE [mg/m²]</u>					
PEDOT/PSS	200	200	200	200	200
BADS01	50	60	70	80	90
NDP15	50	40	30	20	9

TABLE 21-continued

<u>composition of the coating dispersions</u>					
	SAMPLE				
	LVIII	LIX	LX	LXI	LXII
ZONYL FSO 100	8	8	8	8	8

+T1 TABLE 21+HZ, 1/32

!+HC, 1 +UZ, 8/25 composition of the coating dispersions?

!+HC, 12 +UZ, 12/32 SAMPLE?

!+HC, 12 LVIII? +HC, 16 LIX? +HC, 20 LX? +HC, 24 LXI? +HC, 28 LXII+HZ, 1/32 ?

!+TL, 1 +UZ, 1/9 INGREDIENT +8 g+9 ?

!+TL, 1 1.2% aq. dispersion? +TA, 12 41.7? +TA, 16 41.7? +TA, 20 41.7? +TA, 24 41.7? +TA, 28 41.7?

!of PEDOT/PSS?

!2% aq. solution of? 1? 1? 1? 1? 1?

!ZONYL+12 +198 +0 FSO 100?

!BADS01? 0.125? 0.15? 0.175? 0.2? 0.225?

!15.9% sol. of NDP15? 7.86? 6.3? 4.7? 3.14? 1.471?

!in water/isopropanol?

!(40/60 by volume)?

!N-methyl-? +TC +13 ? +TC +13 ? +TC +13 ? +TC +13 ? +TC +13 ?

!pyrrolidinone?

!2.5% aqueous NH+HD 4+L OH? +TA 1.24? +TA 1.24? +TA 1.24? +TA 1.24? +TA 1.24?

!solution?

!deionized water? 48.08? 49.16? 51.19? 52.72? 54.36?

!pH? 3.25? 3.34? 3.38? 3.1? 3.28?

!+UZ, 1/11 COVERAGE +8 mg/m+HU 2+L +9 ?

!PEDOT/PSS? 200? 200? 200? 200? 200?

!BADS01? 50? 60? 70? 80? 90?

!NDP15? 50? 40? 30? 20? 9?

!ZONYL FSO 100? 8? 8? 8? 8? 8+TZ, 1/32 ?

!+PS

Item character count = 645

CWU Table Item #: 0452 (1 column)

PROPERTY	SAMPLE			
	LIV	LV	LVI	LVII
Differentiation after processing between exposed and non-exposed areas	YES	YES	YES	YES
R_s (Ω/square) of coated layer before patterning	9.3×10^6	1.3×10^7	1.5×10^7	1.6×10^7
R_s (Ω/square) of large non-exposed areas after conductivity upgrading	3.1×10^{13}	4.0×10^{13}	5.0×10^{14}	5.0×10^{14}
R_s (Ω/square) of large exposed areas after exposure, processing and conductivity upgrading	3.3×10^3	5.5×10^3	4.1×10^3	3.3×10^3
R_s ratio non-exposed/exposed areas after conductivity upgrading	9.4×10^9	7.3×10^9	1.2×10^{11}	1.5×10^{11}
optical resolution	4 μm	4 μm	4 μm	4 μm

+T1 TABLE 20+HZ, 1/32

!+HC,18 +UZ,18/32 SAMPLE?

!+HL,1 PROPERTY? +HC,18 LIV? +HC,22 LV? +HC,25 LVI? +HC,28 LVII+HZ,1/32 ?

!+TL,1 Differentiation after processing? +TC,18 YES? +TC,22 YES? +TC,25 YES? +TC,28 YES?

!between exposed and non-exposed areas?

!R+HD s +L (+106 /square) of coated layer before? 9.3 +33 ? 1.3 +33 ? 1.5 +33 ? 1.6 +33 ?

!patterning? 10+HU 6? 10+HU 7? 10+HU 7? 10+HU 7?

!R+HD s +L (+106 /square) of large non-exposed? 3.1 +33 ? 4.0 +33 ? 5.0 +33 ? 5.0 +33 ?

!areas after conductivity upgrading? 10+HU 13? 10+HU 13? 10+HU 14? 10+HU 14?

!R+HD s +L (+106 /square) of large exposed areas? 3.3 +33 ? 5.5 +33 ? 4.1 +33 ? 3.3 +33 ?

!after exposure, processing and? 10+HU 3? 10+HU 3? 10+HU 3? 10+HU 3?

!conductivity upgrading?

!R+HD s +L ratio non-exposed/exposed areas? 9.4 +33 ? 7.3 +33 ? 1.2 +33 ? 1.5 +33 ?

!after conductivity upgrading? 10+HU 9? 10+HU 9? 10+HU 11? 10+HU 11?

!optical resolution? 4 +82 m? 4 +82 m? 4 +82 m? 4 +82 m+TZ,1/32 ?

!+PS

Item character count = 661

CWU Table Item #: 0465 (1 column)

TABLE 22

PROPERTY	SAMPLE				
	LVIII	LIX	LX	LXI	LXII
Differentiation after processing between exposed and non-exposed areas	YES	YES	YES	YES	YES
R_s (Ω/square) of coated layer	$1.3 \times 1.1 \times 4.1 \times 4.1 \times 9.1 \times$				

TABLE 22-continued

PROPERTY	SAMPLE				
	LVIII	LIX	LX	LXI	LXII
before patterning	10^7	10^7	10^6	10^6	10^5
R_s (Ω/square) of large non-exposed areas after conductivity upgrading	5.2×10^{15}	2.6×10^{15}	1.5×10^{15}	2.0×10^{15}	5.8×10^{15}
R_s (Ω/square) of exposed areas after exposure, processing and conductivity upgrading	1.8×10^3	3.2×10^3	1.4×10^3	1.9×10^3	3.6×10^3
R_s ratio non-exposed/exposed areas after conductivity upgrading	2.9×10^{12}	10^{11}	10^{12}	10^{12}	10^{12}
bubbles in large areas?	no	no	no	yes	yes

+T1 TABLE 22+HZ, 1/32

!+HC, 17 +UZ, 17/32 SAMPLE?

!+HL, 1 PROPERTY? +HC, 17 LVIII? +HC, 20 LIX? +HC, 23 LX? +HC, 26 LXI? +HC, 29 LXII+HZ, 1/32

?

!+TL, 1 Differentiation after processing? +TC, 17 YES? +TC, 20 YES? +TC, 23 YES? +TC, 26 YES?

+TC, 29 YES?

!between exposed and non-exposed?

!areas?

!R+HD s +L ($+10^6/\text{square}$) of coated layer? 1.3 +33 ? 1.1 +33 ? 4.1 +33 ? 4.1 +33 ? 9.1 +33 ?

!before patterning? 10+HU 7? 10+HU 7? 10+HU 6? 10+HU 6? 10+HU 5?

!R+HD s +L ($+10^6/\text{square}$) of large non-exposed? 5.2 +33 ? 2.6 +33 ? 1.5 +33 ? 2.0 +33 ? 5.8 +33 ?

!areas after conductivity upgrading? 10+HU 15? 10+HU 15? 10+HU 15? 10+HU 15? 10+HU 15?

!R+HD s +L ($+10^6/\text{square}$) of exposed areas? 1.8 +33 ? 3.2 +33 ? 1.4 +33 ? 1.9 +33 ? 3.6 +33 ?

!after exposure, processing and? 10+HU 3? 10+HU 3? 10+HU 3? 10+HU 3? 10+HU 3?

!conductivity upgrading?

!R+HD s +L ratio non-exposed/exposed areas? 2.9 +33 ? 8.1 +33 ? 1.1 +33 ? 1.1 +33 ? 1.6 +33 ?

!after conductivity upgrading? 10+HU 12? 10+HU 11? 10+HU 12? 10+HU 12? 10+HU 12?

!bubbles in large areas+48 ? no? no? no? yes? yes+TZ, 1/32 ?

!+PS

Item character count = 718

CWU Table Item #: 0470 (1 column)

TABLE 23

composition of the coating dispersions

INGRÉDIENT [g]	SAMPLE				
	LXIII	LXIV	LXV	LXVI	LXVII
1.2% aq. dispersion of PEDOT/PSS	16.7	16.7	16.7	16.7	16.7
2% aq. solution of ZONYL™ FSO 100	0.5	0.5	0.5	0.5	0.5
2.5% aqueous NH ₄ OH solution	0.5	0.5	0.5	0.5	0.5
1% aq. solution of BADS01	—	2.5	5.0	7.5	10.0
15.9% solution of NDP15 water/isopropanol 40/60 by volume	0.63	0.47	0.32	0.16	—
N-methyl-pyrrolidinone	—	—	—	—	—
deionized water	31.7	29.3	27.0	24.6	22.3
pH	3.3	3.3	3.3	3.3	3.3
COVERAGE [mg/m ²]					
PEDOT/PSS	200	200	200	200	200
BADS01	0	25	50	75	100
NDP15	100	75	50	25	0
ZONYL FSO 100	10	10	10	10	10

+T1 TABLE 23+HZ, 1/32

!+HC, 1 +UZ, 8/25 composition of the coating dispersions?

!+HC, 12 +UZ, 12/32 SAMPLE?

!+HC, 12 LXIII? +HC, 16 LXIV? +HC, 20 LXV? +HC, 24 LXVI? +HC, 28 LXVII+HZ, 1/32 ?

!+TL, 1 +UZ, 1/9 INGREDIENT +8 g+9 ?

!+TL, 1 1.2% aq. dispersion of? +TA, 12 16.7? +TA, 16 16.7? +TA, 20 16.7? +TA, 24 16.7? +TA, 28 16.7?

!PEDOT/PSS?

!2% aq. solution of? 0.5? 0.5? 0.5? 0.5? 0.5?

!ZONYL+12 +198 +0 FSO 100?

!2.5% aqueous NH+HD 4+L OH? 0.5? 0.5? 0.5? 0.5? 0.5?

!solution?

!1% aq. solution of? +TC +13 ? 2.5? 5.0? 7.5? 10.0?

!BADS01?

!15.9% solution of? +TA 0.63? 0.47? 0.32? 0.16? +TC +13 ?

!NDP15 water/isopro-?

!panol 40/60 by volume?

!N-methyl-pyrrolidinone? +TC +13 ? +TC +13 ? +TC +13 ? +TC +13 ? +13 ?

!deionized water? +TA 31.7? +TA 29.3? +TA 27.0? +TA 24.6? +TA 22.3?

!pH? 3.3? 3.3? 3.3? 3.3? 3.3?

!+UZ, 1/11 COVERAGE +8 mg/m²+HU 2+L +9 ?

!PEDOT/PSS? 200? 200? 200? 200? 200?

!BADS01? 0? 25? 50? 75? 100?

!NDP15? 100? 75? 50? 25? 0?

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!ZONYL FSO 100? 10? 10? 10? 10? 10+TZ, 1/32 ?

+PS

Item character count = 662

CWU Table Item #: 0482 (1 column)

TABLE 24

PROPERTY	SAMPLE				
	LXIII	LXIV	LXV	LXVI	LXVII
Exposure time [s]	100	100	100	100	300
Differentiation after processing between exposed and non-exposed areas	YES	YES	YES	YES	YES
R_s (Ω/square) of coated layer before patterning	9.0×10^6	1.1×10^7	1.4×10^7	9.0×10^6	1.0×10^6
R_s (Ω/square) of large non-exposed areas after processing and conductivity upgrading	1.7×10^7	1.5×10^6	1.2×10^5	5.5×10^{14}	3.5×10^{14}
R_s (Ω/square) of exposed areas after exposure, processing and conductivity upgrading	1.4×10^4	8.2×10^3	5.5×10^3	7.4×10^3	7.8×10^3
R_s ratio non-exposed/exposed areas after conductivity upgrading	1.2×10^3	1.8×10^2	1.1×10^2	7.4×10^{10}	4.5×10^{10}
Optical resolution of lines [μ]	4	4	4	4	4
Optical resolution of spaces [μ] bubbles in large areas?	4	4	4	4	yes
no	no	no	no	yes	

+T1 TABLE 24+HZ, 1/32

+HC, 16 +UZ, 16/32 SAMPLE?

+HL, 1 PROPERTY? +HC, 16 LXIII? +HC, 19 LXIV? +HC, 22 LXV? +HC, 25 LXVI? +HC, 28 LXVII+HZ, 1/32 ?

+TL, 1 Exposure time +8 s+9 ? +TC, 16 100? +TC, 19 100? +TC, 22 100? +TC, 25 100? +TC, 28 300?

Differentiation after processing? YES? YES? YES? YES? YES?

!between exposed and non-exposed?

!areas?

+R+HD s +L (+106 /square) of coated layer? 9.0 +33 ? 1.1 +33 ? 1.4 +33 ? 9.0 +33 ? 1.0 +33 ?

!before patterning? 10+HU 6? 10+HU 7? 10+HU 7? 10+HU 6? 10+HU 6?

+R+HD s +L (+106 /square) of large non-exposed? 1.7 +33 ? 1.5 +33 ? 1.2 +33 ? 5.5 +33 ? 3.5 +33 ?

!areas after processing and? 10+HU 7? 10+HU 6? 10+HU 5? 10+HU 14? 10+HU 14?

!conductivity upgrading?

+R+HD s +L (+106 /square) of exposed areas? 1.4 +33 ? 8.2 +33 ? 5.5 +33 ? 7.4 +33 ? 7.8 +33 ?

!after exposure, processing and? 10+HU 4? 10+HU 3? 10+HU 3? 10+HU 3? 10+HU 3?

!conductivity upgrading?

+R+HD s +L ratio non-exposed/exposed areas? 1.2 +33 ? 1.8 +33 ? 1.1 +33 ? 7.4 +33 ? 4.5

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+33 ?

!after conductivity upgrading? 10+HU 3? 10+HU 2? 10+HU 2? 10+HU 10? 10+HU 10?

!Optical resolution of lines +8 +82 +9 ? +10 4? +10 4? +10 4? +10 4? +10 4?

!Optical resolution of spaces +8 +82 +9 ? +10 4? +10 4? +10 4? +10 4? +10 4?

!bubbles in large areas+48 ? no? no? no? no? yes+TZ,1/32 ?

+PS

Item character count = 867

CWU Table Item #: 0500 (2 columns)

TABLE 27

Support nr. <u>LAYER 1 [g]</u>	SAMPLE					
	LXXV	LXXVI	LXXVII	LXXVIII	LXXIX	LXXX
15.9% sol. NDP14 in water/ isopropanol (40/60 by vol.)	0.63	0.63	0.63	0.63	0.63	0.63
2% aq. sol. ZONYL FSO 100 deionized water	0.5	0.5	0.5	0.5	0.5	0.5
<u>OUTERMOST LAYER 2 [g]</u>	48.87	48.87	48.87	48.87	48.87	48.87
1.2% aq. PEDOT/PSS disp.	16.7	16.7	16.7	16.7	16.7	16.7
2% aq. sol. ZONYL FSO 100	0.5	0.5	0.5	0.5	0.5	0.5
2.5% aqueous NH ₄ OH	0.4	0.4	0.4	0.4	0.4	0.4
Z6040	0.07	—	—	0.07	—	—
15.9% sol. NDP14 in water/ isopropanol (40/60 by vol.)	—	0.63	0.63	—	0.63	0.63
N-methyl-pyrrolidinone	2.5	—	2.5	2.5	—	2.5
deionized water	29.83	31.77	29.27	29.83	31.77	29.27
pH	3.4	3.4	3.4	3.4	3.4	3.4
<u>COVERAGE [mg/m²]</u> <u>LAYER 1</u>						
NDP14	100	100	100	100	100	100
ZONYL FSO 100	10	10	10	10	10	10
<u>OUTERMOST LAYER 2 [mg/m²]</u>						
PEDOT/PSS	200	200	200	200	200	200
3-glycidoxypropyl- trimethoxysilane	70	—	—	70	—	—
NDP14	—	100	100	—	100	100
ZONYL FSO 100	10	10	10	10	10	10

+T2 TABLE 27+HZ,1/42

+HC,16 +UZ,16/42 SAMPLE?

!+HL,1 ? +HC,16 LXXV? +HC,20 LXXVI? +HC,24 LXXVII? +HC,29 LXXVIII? +HC,34 LXXIX? +HC,38
LXXX+HZ,1/42 ?

+TL,1 Support nr.? +TA,16 1? +TA,20 1? +TA,24 1? +TA,29 3? +TA,34 3? +TA,38 3?

+UZ,1/7 LAYER 1 +8 g+9 ?

!15.9% sol. NDP14 in water/? 0.63? 0.63? 0.63? 0.63? 0.63? 0.63?

!isopropanol (40/60 by vol.)?

!2% aq. sol. ZONYL FSO 100? 0.5? 0.5? 0.5? 0.5? 0.5? 0.5?

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!deionized water? 48.87? 48.87? 48.87? 48.87? 48.87? 48.87?
!+UZ,1/13 OUTERMOST LAYER 2 +8 g+9 ?
!1.2% aq. PEDOT/PSS disp.? 16.7? 16.7? 16.7? 16.7? 16.7? 16.7?
!2% aq. sol. ZONYL FSO 100? 0.5? 0.5? 0.5? 0.5? 0.5? 0.5?
!2.5% aqueous NH+HD 4+L OH? 0.4? 0.4? 0.4? 0.4? 0.4? 0.4?
!Z6040? 0.07? +TC +13 ? +TC +13 ? 0.07? +TC +13 ? +TC +13 ? +TC +13 ?
!15.9% sol. NDP14 in water/? +TC +13 ? +TA 0.63? +TA 0.63? +TC +13 ? +TA 0.63? +TA 0.63?
!isopropanol (40/60 by vol.)?
!N-methyl-pyrrolidinone? +TA 2.5? +TC +13 ? 2.5? +TA 2.5? +TC +13 ? 2.5?
!deionized water? 29.83? +TA 31.77? 29.27? 29.83? +TA 31.77? 29.27?
!pH? 3.4? 3.4? 3.4? 3.4? 3.4? 3.4?
!COVERAGE +8 mg/m+HU 2+L +9 ?
!+UZ,1/11 LAYER 1?
!NDP14? 100? 100? 100? 100? 100? 100?
!ZONYL FSO 100? 10? 10? 10? 10? 10? 10?
!+UZ,1/16 OUTERMOST LAYER 2 +8 mg/m+HU 2+L +9 ?
!PEDOT/PSS? 200? 200? 200? 200? 200? 200?
!3-glycidoxypipropyl-? 70? +TC +13 ? +TC +13 ? 70? +TC +13 ? +TC +13 ?
!trimethoxysilane?
!NDP14? +TC +13 ? +TA 100? +TA 100? +TC +13 ? +TA 100? +TA 100?
!ZONYL FSO 100? +TA 10? 10? 10? +TA 10? 10? 10+TZ,1/42 ?
!+PS

Item character count = 1014

Folder character count = 6611

CWU Table Item #: 0511 (2 columns)

TABLE 28

	SAMPLE					
	LXXV	LXXVI	LXXVII	LXXVIII	LXXIX	LXXX
Support nr.	1	1	1	3	3	3
R_s of non-exposed areas unrinised with water [Ω/square]	4.5×10^3	1.7×10^7	5.3×10^3	4.9×10^3	1.3×10^7	4.0×10^3
R_s of non-exposed areas rinsed with water [Ω/square]	3.7×10^5	$>4.0 \times 10^7$	6.3×10^6	1.2×10^{13}	$>4.0 \times 10^7$	1.55×10^{13}
R_s of expoed areas rinsed with water [Ω/square]	8.5×10^3	3.4×10^6	2.2×10^4	3.0×10^4	3.3×10^6	1.3×10^4
R_s ratio of exposed areas to unexposed areas after processing with water	43.5	>11.8	2.9	4.0×10^8	>12.1	1.2×10^9
R_s (Ω/square) of large non-exposed areas after total processing including conductivity upgrading	—	8.5×10^{12}	—	—	1.38×10^{13}	—
R_s (Ω/square) of exposed areas after exposure, processing and conductivity upgrading	—	2.9×10^4	—	—	4.5×10^4	—
R_s ratio of exposed areas to unexposed areas after processing and conductivity upgrading	—	2.9×10^8	—	—	3.1×10^8	—
Optical resolution [μm]	—	6	6	—	6	6

+T2 TABLE 28+HZ, 1/38

!+HC, 12 +UZ, 12/38 SAMPLE?

!+HC, 12 LXXV? +HC, 16 LXXVI? +HC, 20 LXXVII? +HC, 25 LXXVIII? +HC, 30 LXXIX? +HC, 34 LXXX+HZ, 1/38 ?

!+TL, 1 Support nr.? +TC, 12 1? +TC, 16 1? +TC, 20 1? +TC, 25 3? +TC, 30 3? +TC, 34 3?

!R+HD s +L of non-exposed areas? 4.5 +33 ? 1.7 +33 ? 5.3 +33 ? 4.9 +33 ? 1.3 +33 ? 4.0 +33 ?

!unrinised with water? 10+HU 3? 10+HU 7? 10+HU 3? 10+HU 3? 10+HU 7? 10+HU 3?

!+8 +106 /square+9 ?

!R+HD s +L of non-exposed areas? 3.7 +33 ? +22 4.0 +33 ? 6.3 +33 ? 1.2 +33 ? +22 4.0 +33 ? 1.55 +33 ?

!rinsed with water? 10+HU 5? 10+HU 7? 10+HU 6? 10+HU 13? 10+HU 7? 10+HU 13?

!+8 +106 /square+9 ?

!R+HD s +L of expoed areas? 8.5 +33 ? 3.4 +33 ? 2.2 +33 ? 3.0 +33 ? 3.3 +33 ? 1.3 +33 ?

!rinsed with water? 10+HU 3? 10+HU 6? 10+HU 4? 10+HU 4? 10+HU 6? 10+HU 4?

!+8 +106 /square+9 ?

!R+HD s +L ratio of exposed? 43.5? +22 11.8? 2.9? 4.0 +33 ? +22 12.1? 1.2 +33 ?

!areas to unexposed? ? ? ? 10+HU 8? ? 10+HU 9?

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!areas after processing?

!with water?

!R+HD s +L (+106 /square) of large? +13 ? 8.5 +33 ? +13 ? +13 ? 1.38 +33 ? +13 ?

!non-exposed areas after? ? 10+HU 12? ? ? 10+HU 13?

!total processing?

!including conductivity?

!upgrading?

!R+HD s +L (+106 /square) of? +13 ? 2.9 +33 ? +13 ? +13 ? 4.5 +33 ? +13 ?

!exposed areas after? ? 10+HU 4? ? ? 10+HU 4?

!exposure, processing?

!and conductivity?

!upgrading?

!R+HD s +L ratio of exposed? +13 ? 2.9 +33 ? +13 ? +13 ? 3.1 +33 ? +13 ?

!areas to unexposed? ? 10+HU 8? ? ? 10+HU 8?

!areas after processing?

!and conductivity?

!upgrading?

!Optical resolution +8 +82 m+9 ? +13 ? 6? 6? +13 ? 6? 6+TZ, 1/38 ?

!+PS

Item character count = 1031

CWU Table Item #: 0551 (1 column)

TABLE 31

INGREDIENT [g]	SAMPLE				
	LXXXIX	XC	XCI	XCI	XCI
1,2% aq. PEDOT/PSS dispersion	41.7	41.7	41.7	41.7	41.7
2% aq. sol. of ZONYL™ FSO 100	1	1	1	1	1
N-methyl-pyrrolidinone diethylene glycol	5	—	5	—	5
BADS01	0.25	—	—	—	—
BADS02	—	0.25	0.25	0.25	—
1% aq. solution of BADS03	—	—	—	—	25
deionized water	51.15	57.0	52.05	52.05	26.4
2.5% aqueous NH ₄ OH	0.9	—	—	—	0.9
pH	2.6-2.8	—	—	—	2.31
COVERAGE					
PEDOT/PSS [mg/m ²]	200	200	200	200	200
BADS01 [mg/m ²]	100	—	—	—	—
BADS02 [mg/m ²]	—	100	100	100	—
BADS03 [mg/m ²]	—	—	—	—	100
ZONYL™ FSO 100 [mg/m ²]	8	8	8	8	8

+T1 TABLE 31+HZ, 1/32

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!+HC,15 +UZ,15/32 SAMPLE?

!+HC,15 LXXXIX? +HC,20 XC? +HC,23 XCI? +HC,26 XCII? +HC,29 XCIII+HZ,1/32 ?

+TL,1 +UZ,1/8 INGREDIENT +8 g+9 ? +TC,15 ? +TC,20 ? +TC,23 ? +TC,26 ? +TC,29 ?

!1,2% aq. PEDOT/PSS? 41.7? 41.7? 41.7? 41.7? 41.7?

!dispersion?

!2% aq. sol. of ZONYL+12 +198 +0 FSO? 1? 1? 1? 1? 1?

!100?

!N-methyl-pyrrolidinone? 5? +13 ? 5? +13 ? 5?

!diethylene glycol? +13 ? +13 ? +13 ? 5? +13 ?

!BADS01? 0.25? +13 ? +13 ? +13 ? +13 ?

!BADS02? +13 ? 0.25? 0.25? 0.25? +13 ?

!1% ag. solution of BADS03? +13 ? +13 ? +13 ? +13 ? 25?

!deionized water? 51.15? 57.0? 52.05? 52.05? 26.4?

!2.5% aqueous NH+HD 4+L OH? 0.9? +13 ? +13 ? +13 ? 0.9?

!pH? 2.6+14 2.8? +13 ? +13 ? +13 ? 2.31?

!+UZ,1/7 COVERAGE?

!PEDOT/PSS +8 mg/m+HU 2+L +9 ? 200? 200? 200? 200? 200?

!BADS01 +8 mg/m+HU 2+L +9 ? 100? +13 ? +13 ? +13 ? +13 ?

!BADS02 +8 mg/m+HU 2+L +9 ? +13 ? 100? 100? 100? +13 ?

!BADS03 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? +13 ? +13 ? 100?

!ZONYL+12 +198 +0 FSO 100 +8 mg/m+HU 2+L +9 ? 8? 8? 8? 8? 8+TZ,1/32 ?

!+PS

Item character count = 618

CWU Table Item #: 0561 (1 column)

TABLE 32

	SAMPLE				
	LXXXIX	XC	XCI	XCII	XCIII
R _s of exposed layer untreated with water [Ω/square]	1.6 × 10 ⁵	8.6 × 10 ⁶	4.6 × 10 ⁵	2.1 × 10 ⁵	3.7 × 10 ⁵
R _s of exposed layer rinsed with water [Ω/square]	6.1 × 10 ⁵	2.5 × 10 ^{14*}	2.0 × 10 ⁶	4.6 × 10 ⁶	2.6 × 10 ⁶
R _s of non-exposed layer unrinsed with water [Ω/square]	1.2 × 10 ⁴	9.2 × 10 ⁵	5.3 × 10 ³	2.9 × 10 ⁵	1.4 × 10 ⁴
R _s of non-exposed layer rinsed with water [Ω/square]	1.6 × 10 ⁴	2.5 × 10 ^{14*}	1.2 × 10 ⁴	2.1 × 10 ⁶	2.3 × 10 ⁴
R _s ratio of exposed layer to unexposed layer after rinsing with water	38	1.0	16,666	2.2	113

TABLE 32-continued

SAMPLE				
LXXXIX	XC	XCI	XCII	XCIII

*layer is completely removed when surface resistivity is 10^{14} Ω/square

+T1 TABLE 32+HZ, 1/32

!+HC, 11 +UZ, 11/32 SAMPLE?

!+HC, 11 LXXXIX? +HC, 16 XC? +HC, 20 XCI? +HC, 24 XCII? +HC, 28 XCIII+HZ, 1/32?

!+TL, 1 R+HD s +L of exposed layer? +TC, 11 1.6 +33? +TC, 16 8.6 +33? +TC, 20 4.6 +33?

+TC, 24 2.1 +33? +TC, 28 3.7 +33?

!untreated with water? 10+HU 5? 10+HU 6? 10+HU 5? 10+HU 5? 10+HU 5?

!+8 +106 /square+9?

!R+HD s +L of exposed layer? 6.1 +33? 2.5 +33? 2.0 +33? 4.6 +33? 2.6 +33?

!rinsed with water? 10+HU 5? 10+HU 14*? 10+HU 8? 10+HU 6? 10+HU 6?

!+8 +106 /square+9?

!R+HD s +L of non-exposed? 1.2 +33? 9.2 +33? 5.3 +33? 2.9 +33? 1.4 +33?

!layer unrinsed with? 10+HU 4? 10+HU 5? 10+HU 3? 10+HU 5? 10+HU 4?

!water +8 +106 /square+9?

!R+HD s +L of non-exposed? 1.6 +33? 2.5 +33? 1.2 +33? 2.1 +33? 2.3 +33?

!layer rinsed with water? 10+HU 4? 10+HU 14*? 10+HU 4? 10+HU 6? 10+HU 4?

!+8 +106 /square+9?

!R+HD s +L ratio of exposed? 38? 1.0? 16,666? 2.2? 113?

!layer to unexposed?

!layer after rinsing with?

!water+TZ, 1/32?

+L6 *layer is completely removed when surface resistivity is 10+HU 14 +L +106 /square

+PS

Item character count = 686

Folder character count = 2335

CWU Table Item #: 0281 (2 columns)

TABLE 1

INGREDIENT [g]	SAMPLE						
	I (COMP)	II	III	IV	V	VI	VII
1.2% aqueous dispersion of PEDOT/PSS	417	417	417	417	417	417	417
0.25% aqueous solution of NDP01	—	100	250	500	—	—	—
0.25% aqueous solution of NDP02	—	—	—	—	100	250	500
LATEX01	8.3	—	—	—	—	—	—
2% aqueous solution of ZONYL™ FSO 100	10	10	10	10	10	10	10
N-methyl-pyrrolidinone	50	50	50	50	50	50	50
deionized water	514.7	423	273	23	423	423	423
COVERAGE [mg/m ²]							
PEDOT/PSS	200	200	200	200	200	200	200
NDP01	—	10	25	50	—	—	—
NDP02	—	—	—	—	10	25	50
LATEX01	100	—	—	—	—	—	—
ZONYL™ FSO 100	8	8	8	8	8	8	8

+T2 TABLE 1+HZ,1/43

!+HC,20 +UZ,20/43 SAMPLE?

!+HC,20 I (COMP)? +HC,25 II? +HC,28 III? +HC,31 IV? +HC,34 V? +HC,37 VI? +HC,40 VII+HZ,1/43 ?

!+TL,1 +UZ,1/9 INGREDIENT +8 g+9 ? +TA,20 ? +TA,25 ? +TA,28 ? +TA,31 ? +TA,34 ? +TA,37 ? +TA,40 ?

!1.2% aqueous dispersion of PEDOT/PSS? 417? 417? 417? 417? 417? 417? 417?

!0.25% aqueous solution of NDP01? +13 ? 100? 250? 500? +13 ? +13 ? +13 ?

!0.25% aqueous solution of NDP02? +13 ? +13 ? +13 ? +13 ? 100? 250? 500?

!LATEX01? 8.3? +13 ? +13 ? +13 ? +13 ? +13 ? +13 ?

!2% aqueous solution of ZONYL+12 +198 +0 FSO 100? 10? 10? 10? 10? 10? 10?

!N-methyl-pyrrolidinone? 50? 50? 50? 50? 50? 50? 50?

!deionized water? 514.7? 423? 273? 23? 423? 423? 423?

!+UZ,1/11 COVERAGE +8 mg/m²+HU 2+L +9 ?

!PEDOT/PSS? 200? 200? 200? 200? 200? 200?

!NDP01? +13 ? 10? 25? 50? +13 ? +13 ? +13 ?

!NDP02? +13 ? +13 ? +13 ? +13 ? 10? 25? 50?

!LATEX01? 100? +13 ? +13 ? +13 ? +13 ? +13 ? +13 ?

!ZONYL+12 +198 +0 FSO 100? 8? 8? 8? 8? 8? 8? 8+TZ,1/43 ?

!+PS

Item character count = 604

CWU Table Item #: 0292 (2 columns)

TABLE 2

PROPERTY	SAMPLE						
	I (COMP)	II	III	IV	V	VI	VII
R_s differentiation between exposed and non-exposed areas after processing	no	yes	yes	yes	yes	yes	yes
R_s (Ω/square) of coated layer before patterning	730	760	650	980	490	620	1500
R_s (Ω/square) of the non-exposed areas after exposure and processing	—	5×10^4					
R_s (Ω/square) of the non-exposed areas after exposure and thorough rubbing during processing	—	$>10^{10}$	$>10^{10}$	$>10^{10}$	$>10^{10}$	$>10^{10}$	$>10^{10}$
R_s (Ω/square) of the exposed areas after exposure and processing	730	850	650	960	480	630	1500

+T2 TABLE 2+HZ,1/44

!+HC,15 +UZ,15/44 SAMPLE?

!+HL,1 PROPERTY? +HC,15 I (COMP)? +HC,20 II? +HC,24 III? +HC,28 IV? +HC,32 V? +HC,36 VI? +HC,40 VII+HZ,1/44 ?

!+TL,1 R+HD s +L differentiation between? +TC,15 no? +TC,20 yes? +TC,24 yes? +TC,28 yes? +TC,32 yes? +TC,36 yes? +TC,40 yes?

!exposed and non-exposed areas?

!after processing?

!R+HD s +L ($+106/\text{square}$) of coated layer? 730? 760? 650? 980? 490? 620? 1500?

!before patterning?

!R+HD s +L ($+106/\text{square}$) of the non-? +13? 5 +33 +0 10+HU 4? 5 +33 +0 10+HU 4?

!exposed areas after exposure?

!and processing?

!R+HD s +L ($+106/\text{square}$) of the non-? +13? +22 10+HU 10? +22 10+HU 10? +22 10+HU 10? +22 10+HU 10? +22 10+HU 10?

!exposed areas after exposure?

!and thorough rubbing during?

!processing?

!R+HD s +L ($+106/\text{square}$) of the exposed? 730? 850? 650? 960? 480? 630? 1500?

!areas after exposure and?

!processing+TZ,1/44 ?

!+PS

CWU Table Item #: 0300 (2 columns)

TABLE 3

	SAMPLE						
	VIII (COMP)	IX	X	XI	XII	XIII	XIV
INGREDIENT [g]							
1.2% aq. PEDOT/PSS dispersion	417	417	417	417	417	417	417
17% solution of NDP03 in isopropanol/water (60/40)	—	1.5	3.7	7.1	14.2	28.4	56.8
LATEX01	8.3	—	—	—	—	—	—
2% aq. sol. ZONYL™ FSO 100	10	10	10	10	10	10	10
N-methyl-pyrrolidinone	50	50	50	50	50	50	50
deionized water	514.7	522	519	516	509	495	466
COVERAGE							
PEDOT/PSS [mg/m ²]	200	200	200	200	200	200	200
NDP03 [mg/m ²]	—	10	25	50	100	200	400
LATEX01 [mg/m ²]	100	—	—	—	—	—	—
ZONYL™ FSO 100	8	8	8	8	8	8	8

+T2 TABLE 3+HZ, 1/43

!+HC, 1 +UZ, 14/30 composition of the coating dispersions?

!+HC, 16 +UZ, 16/43 SAMPLE?

!+HC, 16 VIII (COMP)? +HC, 23 IX? +HC, 26 X? +HC, 29 XI? +HC, 34 XII? +HC, 37 XIII? +HC, 40 XIV+HZ, 1/43 ?

!+TL, 1 INGREDIENT +8 g+9? +TA, 16? +TA, 23? +TA, 26? +TA, 29? +TA, 34? +TA, 37? +TA, 40?

!1.2% aq. PEDOT/PSS dispersion? 417? 417? 417? 417? 417? 417? 417?

!17% solution of NDP03 in? +13? 1.5? 3.7? 7.1? 14.2? 28.4? 56.8?

!isopropanol/water (60/40)?

!LATEX01? 8.3? +13? +13? +13? +13? +13? +13?

!2% aq. sol. ZONYL+12 +198 +0 FSO 100? 10? 10? 10? 10? 10? 10?

!N-methyl-pyrrolidinone? 50? 50? 50? 50? 50? 50? 50?

!deionized water? 514.7? 522? 519? 516? 509? 495? 466?

!+UZ, 1/7 COVERAGE?

!PEDOT/PSS +8 mg/m+HU 2+L +9? 200? 200? 200? 200? 200? 200?

!NDP03 +8 mg/m+HU 2+L +9? +13? 10? 25? 50? 100? 200? 400?

!LATEX01 +8 mg/m+HU 2+L +9? 100? +13? +13? +13? +13? +13? +13?

!ZONYL+12 +198 +0 FSO 100? 8? 8? 8? 8? 8? 8+TZ, 1/43?

!+PS

Item character count = 611

TABLE 4

property	VIII (COMP)	IX	X	XI	XII	XIII	XIV
R_s differentiation between exposed and non-exposed areas after processing	no	yes	yes	yes	yes	yes	yes
R_s (Ω/square) of coated layer before patterning	760	689	739	790	1100	1600	5500
R_s (Ω/square) of the non-exposed areas after exposure and processing	—	$>10^5$	$>10^5$	$>10^5$	$>10^5$	$>10^5$	$>10^5$
R_s (Ω/square) of the non-exposed areas after exposure and thorough rubbing during processing	—	$>10^{10}$	$>10^{10}$	$>10^{10}$	$>10^{10}$	$>10^{10}$	$>10^{10}$
R_s (Ω/square) of exposed areas after exposure and processing	760	1344	1375	1360	2100	2400	22000

+T2 TABLE 4+HZ,1/39

!+HL,1 property? +HC,13 VIII (COMP)? +HC,20 IX? +HC,23 X? +HC,26 XI? +HC,29 XII? +HC,32 XIII? +HC,35 XIV+HZ,1/39 ?

+TL,1 R+HD s +L differentiation between? +TC,13 no? +TC,20 yes? +TC,23 yes? +TC,26 yes?
+TC,29 yes? +TC,32 yes? +TC,35 yes?

!exposed and non-exposed?

!areas after processing?

!R+HD s +L ($+10^6/\text{square}$) of coated? 760? +11 689? +11 739? +11 790? 1100? 1600? +11 5500?

!layer before patterning?

!R+HD s +L ($+10^6/\text{square}$) of the non-? +13 ? +22 10+HU 5? +22 10+HU 5?

!exposed areas after?

!exposure and processing?

!R+HD s +L ($+10^6/\text{square}$) of the non-? +13 ? +22 10+HU 10? +22 10+HU 10? +22 10+HU 10?
+22 10+HU 10? +22 10+HU 10? +22 10+HU 10?

!exposed areas after?

!exposure and thorough?

!rubbing during processing?

!R+HD s +L ($+10^6/\text{square}$) of exposed? 760? 1344? 1375? 1360? 2100? 2400? 22000?

!areas after exposure and?

!processing+TZ,1/39 ?

+PS

Item character count = 623

TABLE 5

INGREDIENT [g]	SAMPLE									
	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV
Support nr.	1	1	1	2	3	4	5	6	7	8
1.2% aqueous dispersion of PEDOT/PSS	417	417	417	417	417	417	417	417	417	417
17.8% aq. sol. of NDP04	7	14	21	14	14	14	14	14	14	14
2% aqueous solution of ZONYL™ FSO 100	10	10	10	10	10	10	10	10	10	10
N-methyl-pyrrolidinone	50	50	50	50	50	50	50	50	50	50
deionized water	516	509	502	509	509	509	509	509	509	509
<u>COVERAGE</u>										
PEDOT/PSS [mg/m ²]	200	200	200	200	200	200	200	200	200	200
NDP04 [mg/m ²]	50	100	150	100	100	100	100	100	100	100
ZONYL FSO 100 [mg/m ²]	8	8	8	8	8	8	8	8	8	8

+T2 TABLE 5+HZ, 1/46

!+HC, 1 +UZ, 15/32 composition of the coating dispersions?

!+HC, 13 +UZ, 13/46 SAMPLE?

!+HC, 13 XV? +HC, 16 XVI? +HC, 19 XVII? +HC, 22 XVIII? +HC, 26 XIX? +HC, 29 XX? +HC, 32 XXI?

+HC, 35 XXII? +HC, 38 XXIII? +HC, 42 XXIV+HZ, 1/46 ?

!+TL, 1 INGREDIENT +8 g+9 ? +TA, 13 ? +TA, 16 ? +TA, 19 ? +TA, 22 ? +TA, 26 ? +TA, 29 ? +TA, 32 ? +TA, 35 ? +TA, 38 ? +TA, 42 ?

!Support nr.? 1? 1? 1? 2? 3? 4? 5? 6? 7? 8?

!1.2% aqueous dispersion? 417? 417? 417? 417? 417? 417? 417? 417? 417? 417?

!of PEDOT/PSS?

!17.8% aq. sol. of NDP04? 7? 14? 21? 14? 14? 14? 14? 14? 14? 14?

!2% aqueous solution of? 10? 10? 10? 10? 10? 10? 10? 10? 10? 10?

!ZONYL+12 +198 +0 FSO 100?

!N-methyl-pyrrolidinone? 50? 50? 50? 50? 50? 50? 50? 50? 50? 50?

!deionized water? 516? 509? 502? 509? 509? 509? 509? 509? 509? 509?

!+UZ, 1/7 COVERAGE?

!PEDOT/PSS +8 mg/m+HU 2+L +9 ? 200? 200? 200? 200? 200? 200? 200? 200?

!NDP04 +8 mg/m+HU 2+L +9 ? 50? 100? 150? 100? 100? 100? 100? 100?

!ZONYL FSO 100 +8 mg/m+HU 2+L +9 ? 8? 8? 8? 8? 8? 8? 8? 8? 8+TZ, 1/46 ?

!+PS

Item character count = 679

CWU Table Item #: 0322 (2 columns)

TABLE 6

PROPERTY	SAMPLE									
	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV
Support nr	1	1	1	2	3	4	5	6	7	8
R_s (Ω/square) of coated layer before patterning	1.7×10^3	5.2×10^3	1.5×10^4	3.8×10^3	3.8×10^3	1.8×10^5	4.1×10^3	2.5×10^5	4.0×10^3	9.7×10^3
R_s (Ω/square) of non-exposed areas after exposure and processing	2.4×10^5	4.2×10^5	6.3×10^5	6.5×10^{12}	6.2×10^{12}	9.9×10^8	3.8×10^{12}	9.0×10^6	9.6×10^5	1.1×10^5
R_s (Ω/square) of exposed areas after exposure	—	7.2×10^3	—	5.6×10^3	6.1×10^3	2.4×10^5	6.1×10^3	3.4×10^5	6.9×10^3	2.2×10^4
R_s (Ω/square) of exposed areas after exposure and processing	4.8×10^4	1.6×10^4	1.5×10^5	1.2×10^4	1.2×10^4	1.0×10^6	1.1×10^4	1.2×10^6	4.8×10^5	5.1×10^4
R_s ratio non-exposed/exposed areas	5	26.3	4.2	5×10^8	5×10^8	990	4×10^8	7.5	2.0	2.2

+T2 TABLE 6+HZ, 1/64

!+HC, 12 +UZ, 12/64 SAMPLE?

!+HL, 1 PROPERTY? +HC, 12 XV? +HC, 17 XVI? +HC, 22 XVII? +HC, 28 XVIII? +HC, 33 XIX? +HC, 38 XX? +HC, 43 XXI? +HC, 48 XXII? +HC, 54 XXIII? +HC, 59 XXIV+HZ, 1/64 ?

!+TL, 1 Support nr? +TC, 12 1? +TC, 17 1? +TC, 22 1? +TC, 28 2? +TC, 33 3? +TC, 38 4? +TC, 43 5? +TC, 48 6? +TC, 54 7? +TC, 59 8?

!R+HD s +L (+106 /square) of? 1.7 +33 +0 10+HU 3? 5.2 +33 +0 10+HU 3? 1.5 +33 +0 10+HU 4? 3.8 +33 +0 10+HU 3+11? 3.8 +33 +0 10+HU 3+11? 1.8 +33 +0 10+HU 5? 4.1 +33 +0 10+HU 3+11? 2.5 +33 +0 10+HU 5? 4.0 +33 +0 10+HU 3? 9.7 +33 +0 10+HU 3?

!coated layer before?

!patterning?

!R+HD s +L (+106 /square) of? 2.4 +33 +0 10+HU 5? 4.2 +33 +0 10+HU 5? 6.3 +33 +0 10+HU 5? 6.5 +33 +0 10+HU 12? 6.2 +33 +0 10+HU 12? 9.9 +33 +0 10+HU 8? 3.8 +33 +0 10+HU 12? 9.0 +33 +0 10+HU 6? 9.6 +33 +0 10+HU 5? 1.1 +33 +0 10+HU 5?

!non-exposed areas?

!after exposure and?

!processing?

!R+HD s +L (+106 /square) of? +13? 7.2 +33 +0 10+HU 3? +13? 5.6 +33 +0 10+HU 3+11? 6.1 +33 +0 10+HU 3+11? 2.4 +33 +0 10+HU 5? 6.1 +33 +0 10+HU 3+11? 3.4 +33 +0 10+HU 5? 6.9 +33 +0 10+HU 3? 2.2 +33 +0 10+HU 4?

!exposed areas after?

!exposure?

!R+HD s +L (+106 /square) of? 4.8 +33 +0 10+HU 4? 1.6 +33 +0 10+HU 4? 1.5 +33 +0 10+HU 5? 1.2 +33 +0 10+HU 4+11? 1.2 +33 +0 10+HU 4+11? 1.0 +33 +0 10+HU 6? 1.1 +33 +0 10+HU 4+11? 1.2 +33 +0 10+HU 6? 4.8 +33 +0 10+HU 5? 5.1 +33 +0 10+HU 4?

!exposed areas after?

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!exposure and processing?

!R+HD s +L ratio non-? 5? 26.3? 4.2? +11 +12 5 +33 +0 10+HU 8+11? +11 +12 5 +33 +0 10+HU
8+11? 990? +11 +12 4 +33 +0 10+HU 8+11? 7.5? 2.0? 2.2?

!exposed/exposed areas+TZ,1/64?

+PS

Item character count = 910

CWU Table Item #: 0400 (2 columns)

TABLE 15

	SAMPLE						
	XLIV	XLV	XLVI	XLVII	XLVIII	XLIX	L
INGREDIENT [g]							
1.2% aqueous dispersion of PEDOT/PSS	41.7	41.7	41.7	41.7	41.7	41.7	41.7
2% aqueous solution of ZONYL™ FSO 100	1	1	1	1	1	1	1
N-methyl-pyrrolidinone	—	—	—	—	—	—	—
BADS01	—	0.125	0.25	0.25	0.375	0.50	—
BADS02	—	—	—	—	—	—	0.25
deionized water	57.30	57.18	57.05	57.05	56.93	56.80	57.05
<u>COVERAGE</u>							
PEDOT/PSS [mg/m ²]	200	200	200	200	200	200	200
BADS01 [mg/m ²]	—	50	100	100	150	200	100
% by weight of BADS01 w.r.t. PEDOT/PSS	0	25	50	50	75	100	—
ZONYL™ FSO 100 [mg/m ²]	8	8	8	8	8	8	8

+T2 TABLE 15+HZ,1/42

+HC,14 +UZ,14/42 SAMPLE?

+HC,14 XLIV? +HC,18 XLV? +HC,22 XLVI? +HC,26 XLVII? +HC,30 XLVIII? +HC,34 XLIX? +HC,38 L+HZ,1/42?

+TL,1 INGREDIENT +8 g+9? +TA,14? +TA,18? +TA,22? +TA,26? +TA,30? +TA,34? +TA,38?

!1.2% aqueous dispersion? 41.7? 41.7? 41.7? 41.7? 41.7? 41.7? 41.7?

!of PEDOT/PSS?

!2% aqueous solution of? 1? 1? 1? 1? 1? 1? 1?

!ZONYL+12 +198 +0 FSO 100?

!N-methyl-pyrrolidinone? +13? +13? +13? +13? +13? +13? +13?

!BADS01? +13? 0.125? 0.25? 0.25? 0.375? 0.50? +13?

!BADS02? +13? +13? +13? +13? +13? +13? 0.25?

!deionized water? 57.30? 57.18? 57.05? 57.05? 56.93? 56.80? 57.05?

+UZ,1/7 COVERAGE?

+PEDOT/PSS +8 mg/m²+HU 2+L +9? 200? 200? 200? 200? 200? 200?

!BADS01 +8 mg/m²+HU 2+L +9? +13? 50? 100? 100? 150? 200? 100?

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!8 by weight of BADS01? 0? 25? 50? 50? 75? 100? +13?

!w.r.t. PEDOT/PSS?

!ZONYL+12 +198 +0 FSO 100 +8 mg/m²+HU 2+L +9? 8? 8? 8? 8? 8? 8? 8+TZ, 1/42?

+PS

Item character count = 592

CWU Table Item #: 0411 (2 columns)

TABLE 16

	SAMPLE						
	XLIV	XLV	XLVI	XLVII	XLVIII	XLIX	L
BADS01 [mg/m ²]	—	50	100	100	150	200	—
R _s of non-exposed layer untreated with water [Ω/square]	3.3 × 10 ⁶	1.5 × 10 ⁶	6.2 × 10 ⁴	4.5 × 10 ⁴	6.9 × 10 ³	1.1 × 10 ⁴	2.7 × 10 ⁶
R _s of non-exposed layer rinsed with water [Ω/square]	4.7 × 10 ⁸	1.1 × 10 ⁹	1 × 10 ¹² / 1.3 × 10 ¹⁴	5.0 × 10 ¹² / 7.3 × 10 ¹³	1.0 × 10 ¹³	1.4 × 10 ¹⁴	2.5 × 10 ¹⁴
R _s of exposed layer untreated with water [Ω/square]	3.0 × 10 ⁶	1.1 × 10 ⁶	1.7 × 10 ⁵	9.0 × 10 ⁴	2.6 × 10 ⁴	3.7 × 10 ⁴	1.0 × 10 ⁷
R _s of exposed layer rinsed with water [Ω/square]	3.5 × 10 ⁸	9.7 × 10 ⁵	1.5 × 10 ⁵	9.9 × 10 ⁴	4.1 × 10 ⁴	4.1 × 10 ⁴	3.6 × 10 ⁸
ratio of exposed layer to unexposed layer after rinsing with water	1.3	1134	7 × 10 ⁶ / 9 × 10 ⁸	5 × 10 ⁷ / 7.3 × 10 ⁹	2.4 × 10 ⁸	3.4 × 10 ⁹	6.9 × 10 ⁶
R _s of exposed layer after rinsing with water [Ω/square] and conductivity enhancement	—	1.4 × 10 ³	1.6 × 10 ³	1.7 × 10 ³	3.3 × 10 ³	2.7 × 10 ³	1.0 × 10 ⁶

+T2 TABLE 16+HZ, 1/49

+HC, 12 +UZ, 12/49 SAMPLE?

+HC, 12 XLIV? +HC, 17 XLV? +HC, 22 XLVI? +HC, 28 XLVII? +HC, 34 XLVIII? +HC, 39 XLIX? +HC, 44 L+HZ, 1/49?

+TL, 1 BADS01 +8 mg/m²+HU 2+L +9? +TC, 12 +13? +TC, 17 50? +TC, 22 100? +TC, 28 100? +TC, 34 150? +TC, 39 200? +TC, 44 +13?

+R+HD s +L of non-exposed layer? 3.3 +33 +0 10+HU 6? 1.5 +33 +0 10+HU 6? 6.2 +33 +0 10+HU 4+11 +L +12? 4.5 +33 +0 10+HU 4+11 +L +12? 6.9 +33 +0 10+HU 3+11? 1.1 +33 +0 10+HU 4+11? 2.7 +33 +0 10+HU 6+11?

!untreated with water?

+8 +106 /square+9?

+R+HD s +L of non-exposed layer? 4.7 +33 +0 10+HU 8? 1.1 +33 +0 10+HU 9? +11 +12 1 +33 +0 10+HU 12+L/? 5.0 +33 +0 10+HU 12+L/? 1.0 +33 +0 10+HU 13? 1.4 +33 +0 10+HU 14? 2.5 +33 +0 10+HU 14?

+rinsed with water? ? ? 1.3 +33 +0 10+HU 14+L +12? 7.3 +33 +0 10+HU 13+L +12?

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!+8 +106 /square+9 ?

!R+HD s +L of exposed layer? 3.0 +33 +0 10+HU 6? 1.1 +33 +0 10+HU 6? 1.7 +33 +0 10+HU
5+11 +L +12 ? 9.0 +33 +0 10+HU 4+11 +L +12 ? 2.6 +33 +0 10+HU 4+11 ? 3.7 +33 +0 10+HU
4+11 ? 1.0 +33 +0 10+HU 7+11 ?

!untreated with water?

!+8 +106 /square+9 ?

!R+HD s +L of exposed layer? 3.5 +33 +0 10+HU 8? 9.7 +33 +0 10+HU 5? 1.5 +33 +0 10+HU
5+11 +L +12 ? 9.9 +33 +0 10+HU 4+11 +L +12 ? 4.1 +33 +0 10+HU 4+11 ? 4.1 +33 +0 10+HU
4+11 ? 3.6 +33 +0 10+HU 8+11 ?

!rinsed with water?

!+8 +106 /square+9 ?

!ratio of exposed layer? 1.3? 1134? +11 +12 7 +33 +0 10+HU 6+L /+HU +11 ? +11 +12 5 +33
+0 10+HU 7+L /+HU +11 ? 2.4 +33 +0 10+HU 8+11 ? 3.4 +33 +0 10+HU 9+11 ? 6.9 +33 +0 10+HU
6+11 ?

!to unexposed layer? ? ? +11 +12 9 +33 +0 10+HU 8+11 +L +12 ? 7.3 +33 +0 10+HU 9+11 +L
+12 ?

!after rinsing with?

!water?

!R+HD s +L of exposed layer? +13 ? 1.4 +33 +0 10+HU 3? 1.6 +33 +0 10+HU 3+11 +L +12 ?
1.7 +33 +0 10+HU 3+11 +L +12 ? 3.3 +33 +0 10+HU 3+11 ? 2.7 +33 +0 10+HU 3+11 ? 1.0 +33
+0 10+HU 6+11 ?

!after rinsing with?

!water +8 +106 /square+9 +0 and?

!conductivity?

!enhancement+TZ,1/49 ?

+PS

Item character count = 1064

CWU Table Item #: 0490 (2 columns)

TABLE 25

Support nr. LAYER 1	SAMPLE						
	LXVIII	LXIX	LXX	LXXI	LXXII	LXXIII	LXXIV
	1	1	1	1	3	3	3
NDP04 [mg/m ²] OUTERMOST LAYER 2 [mg/m ²]	100	100	100	100	100	100	100

TABLE 25-continued

	SAMPLE						
	LXVIII	LXIX	LXX	LXXI	LXXII	LXXIII	LXXIV
PEDOT/PSS	200	200	200	200	200	200	200
Z6040	200	70	—	—	200	70	—
NDP04	—	—	—	100	—	—	100
N-methyl-pyrrolidinone	2500	2500	2500	—	2500	2500	2500

+T2 TABLE 25+HZ, 1/41

!+HC, 16 +UZ, 16/41 SAMPLE?

!+HC, 16 LXVIII? +HC, 20 LXIX? +HC, 23 LXX? +HC, 26 LXXI? +HC, 29 LXXII? +HC, 33 LXXIII?
+HC, 37 LXXIV+HZ, 1/41 ?

!+TL, 1 Support nr.? +TA, 16 1? +TA, 20 1? +TA, 23 1? +TA, 26 1? +TA, 29 3? +TA, 33 3? +TA, 37 3?

!+UZ, 1/6 LAYER 1?

!NDP04 +8 mg/m+HU 2+L +9 ? 100? 100? 100? 100? 100? 100?

!+UZ, 1/16 OUTERMOST LAYER 2 +8 mg/m+HU 2+L +9 ?

!PEDOT/PSS? 200? 200? 200? 200? 200? 200? 200?

!Z6040? 200? 70? +13 ? +13 ? 200? 70? +13 ?

!NDP04? +13 ? +13 ? +13 ? 100? +13 ? +13 ? 100?

!N-methyl-pyrrolidinone? 2500? 2500? 2500? +13 ? 2500? 2500? 2500+TZ, 1/41 ?

!+PS

Item character count = 339

CWU Table Item #: 0491 (2 columns)

TABLE 26

	SAMPLE						
	LXVIII	LXIX	LXX	LXXI	LXXII	LXXIII	LXXIV
Support nr.	1	1	1	1	3	3	3
Exposure times [s]	100	150	150	100	100	150	150
R_s of non-exposed areas unrinsed with water [Ω/square]	1.2×10^4	4.2×10^3	6.0×10^3	2.6×10^7	1.5×10^4	3.0×10^3	3.2×10^5
R_s of non-exposed areas rinsed with water [Ω/square]	6.2×10^{12}	$>4.0 \times 10^7$	$>4.0 \times 10^7$	3.2×10^{13}	4.6×10^{12}	$>4.0 \times 10^7$	1.2×10^{13}
R_s of exposed areas rinsed with water [Ω/square]	1.1×10^5	2.7×10^4	3.0×10^4	1.13×10^7	1.5×10^5	2.1×10^3	1.0×10^5
R_s ratio of exposed areas to unexposed areas after rinsing with water	5.6×10^7	$>1.5 \times 10^3$	$>1.3 \times 10^3$	2.8×10^6	3.1×10^7	$>1.9 \times 10^4$	1.2×10^8
Resolution [μm]	—	6	—	6	10	—	6

+T2 TABLE 26+HZ, 1/48

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!+HC,12 +UZ,12/48 SAMPLE?

!+HC,12 LXVIII? +HC,17 LXIX? +HC,22 LXX? +HC,27 LXXI? +HC,33 LXXII? +HC,38 LXXIII?
+HC,43 LXXIV+HZ,1/48 ?

!+TL,1 Support nr.? +TC,12 +10 1? +TC,17 +10 1? +TC,22 +10 1? +TC,27 +10 1? +TC,33 +10
3? +TC,38 +10 3? +TC,43 +10 3?

!Exposure times +8 s+9 ? 100? 150? 150? 100? 100? 150? 150?

!R+HD s +L of non-exposed areas? 1.2 +33 +0 10+HU 4+11 ? +11 4.2 +33 +0 10+HU 3? +11 6.0
+33 +0 10+HU 3? 2.6 +33 +0 10+HU 7+11 ? 1.5 +33 +0 10+HU 4+11 ? +11 3.0 +33 +0 10+HU 3?
3.2 +33 +0 10+HU 5+11 ?

!unrinsed with water?

!+8 +106 /square+9 ?

!R+HD s +L of non-exposed areas? 6.2 +33 +0 10+HU 12? +22 4.0 +33 +0 10+HU 7? +22 4.0
+33 +0 10+HU 7? 3.2 +33 +0 10+HU 13? 4.6 +33 +0 10+HU 12? +22 4.0 +33 +0 10+HU 7? 1.2
+33 +0 10+HU 13?

!rinsed with water?

!+8 +106 /square+9 ?

!R+HD s +L of exposed areas? 1.1 +33 +0 10+HU 5+11 ? +11 2.7 +33 +0 10+HU 4? +11 3.0 +33
+0 10+HU 4? 1.13 +33 +0 10+HU 7+11 +L +11 ? 1.5 +33 +0 10+HU 5+11 ? +11 2.1 +33 +0 10+HU
3? 1.0 +33 +0 10+HU 5+11 ?

!rinsed with water?

!+8 +106 /square+9 ?

!R+HD s +L ratio of exposed? 5.6 +33 +0 10+HU 7+11 ? +22 1.5 +33 +0 10+HU 3? +22 1.3 +33
+0 10+HU 3? 2.8 +33 +0 10+HU 6+11 ? 3.1 +33 +0 10+HU 7+11 ? +22 1.9 +33 +0 10+HU 4? 1.2
+33 +0 10+HU 8+11 ?

!areas to unexposed?

!areas after rinsing?

!with water?

!Resolution +8 +82 m+9 ? +13 ? +10 6? +13 ? +10 6? +11 10 ? +13 ? +10 6+TZ,1/48 ?

!+PS

Item character count = 786

Folder character count = 6846

CWU Table Item #: 0530 (2 columns)

TABLE 29

INGREDIENT [g]	SAMPLE							
	LXXXI (COMP)	LXXXII	LXXXIII	LXXXIV	LXXXV	LXXXVI	LXXXVII	LXXXVIII
1.2% aq. PEDOT/PSS dispersion	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7
2% aq. solution of ZONYL™ FSO 100	1	1	1	1	1	1	1	1
N-methyl-pyrrolidinone	5	5	5	5	5	5	5	5
BADS02	0	0.025	0.0625	0.125	—	0.25	0.25	0.5
1% aq. sol. BADS02 deionized water	—	—	—	—	21.8	—	—	—
2.5% aqueous NH ₄ OH	51.02	51.00	50.96	50.90	21.5	50.99	51.15	51.12
pH	1.28	1.28	1.28	1.28	9.0	1.06	0.9	0.68
COVERAGE [mg/m ²]	3.41	3.3	3.17	3.45	3.26	3.53	2.6-2.8	3.55
PEDOT/PSS	200	200	200	200	200	200	200	200
BADS02	0	10	25	50	87*	100	100	200
ZONYL™ FSO 100	8	8	8	8	8	8	8	8

* 2.0×10^{-4} mol/m²

+T2 TABLE 29+HZ, 1/52

!+HC, 11 +UZ, 11/52 SAMPLE?

!+HC, 11 LXXXI? +HC, 16? +HC, 21? +HC, 26? +HC, 31? +HC, 36? +HC, 41? +HC, 46?

!(COMP)? LXXXII? LXXXIII? LXXXIV? LXXXV? LXXXVI? LXXXVII? LXXXVIII+HZ, 1/52?

!+TL, 1 +UZ, 1/9 INGREDIENT +8 g+9? +TA, 11? +TA, 16? +TA, 21? +TA, 26? +TA, 31? +TA, 36?
? +TA, 41? +TA, 46?

!1.2% aq. PEDOT/PSS? 41.7? 41.7? 41.7? 41.7? 41.7? 41.7? 41.7? 41.7?

!dispersion?

!2% aq. solution of? 1? 1? 1? 1? 1? 1? 1?

!ZONYL+12 +198 +0 FSO 100?

!N-methyl-? 5? 5? 5? 5? 5? 5? 5?

!pyrrolidinone?

!BADS02? 0? 0.025? 0.0625? 0.125? +13? 0.25? 0.25? 0.5?

!1% aq. sol. BADS02? +13? +13? +13? +13? 21.8? +13? +13? +13?

!deionized water? 51.02? 51.00? 50.96? 50.90? 21.5? 50.99? 51.15? 51.12?

!2.5% aqueous NH₄OH 4+L OH? 1.28? 1.28? 1.28? 1.28? 9.0? 1.06? 0.9? 0.68?

!pH? 3.41? 3.3? 3.17? 3.45? 3.26? 3.53? +TC 2.6+14 2.8? 3.55?

!+UZ, 1/11 COVERAGE +8 mg/m²+HU 2+L +9?

!PEDOT/PSS? 200? 200? 200? 200? +TC 200? 200? +TA 200? 200?

!BADS02? 0? 10? 25? 50? +10 87*? 100? 100? 200?

!ZONYL+12 +198 +0 FSO 100? 8? 8? 8? 8? +10 8? 8? 8? 8? 8+TZ, 1/52?

!+L6 *2.0 +33 +0 10+HU +31 4 +L mol/m²+HU 2+L

!+PS

Item character count = 722

CWU Table Item #: 0542 (2 columns)

TABLE 30

	SAMPLE							
LXXXI (COMP)	LXXXII	LXXXIII	LXXXIV	LXXXV	LXXXVI	LXXXVII	LXXXVIII	
BADS02 [mg/m ²]	0	10	25	50	87	100	100	200
R _s of exposed layer unrinised with water [Ω/square]	2.2 × 10 ³	1.9 × 10 ⁴	1.5 × 10 ⁵	1.5 × 10 ⁶	5.3 × 10 ⁶	7.8 × 10 ⁶	1.0 × 10 ⁷	2.0 × 10 ⁷
R _s of exposed areas rinsed with water [Ω/square]	2.9 × 10 ³	3.4 × 10 ⁴	4.9 × 10 ⁵	7.2 × 10 ⁶	6.7 × 10 ⁷	1.1 × 10 ⁸	1.5 × 10 ⁸	1.1 × 10 ⁸
R _s of non-exposed areas unrinised with H ₂ O [Ω/square]	2.1 × 10 ³	2.5 × 10 ³	3.3 × 10 ³	5.9 × 10 ³	6.2 × 10 ³	1.2 × 10 ⁴	1.3 × 10 ⁴	6.5 × 10 ⁴
R _s of non-exposed areas rinsing with water [Ω/square]	2.7 × 10 ³	3.8 × 10 ³	5.1 × 10 ³	1.1 × 10 ⁴	6.2 × 10 ³	2.1 × 10 ⁴	1.8 × 10 ⁴	1.4 × 10 ⁵
R _s ratio of exposed areas to unexposed areas after rinsing with water	1.1	8.95	96.1	654.5	10806	5238	8333	785.7

+T2 TABLE 30+HZ,1/50

!+HC,9 +UZ,9/50 SAMPLE?

!+HC,9 LXXXI? +HC,14 ? +HC,19 ? +HC,24 ? +HC,29 ? +HC,34 ? +HC,39 ? +HC,44 ?

!(COMP)? LXXXII? LXXXIII? LXXXIV? LXXXV? LXXXVI? LXXXVII? LXXXVIII+HZ,1/50 ?

!+TL,1 BADS02 +8 mg/m²+HU 2+L +9 ? +TC,9 0? +TC,14 10? +TC,19 25? +TC,24 50? +TC,29 87?

+TC,34 100? +TC,39 100? +TC,44 200?

!R+HD s +L of exposed? 2.2 +33 +0 10+HU 3? 1.9 +33 +0 10+HU 4? 1.5 +33 +0 10+HU 5? 1.5

+33 +0 10+HU 6? 5.3 +33 +0 10+HU 6? 7.8 +33 +0 10+HU 6? 1.0 +33 +0 10+HU 7? 2.0 +33 +0

10+HU 7?

!layer unrinised?

!with water?

!+8 +106 /square+9 ?

!R+HD s +L of exposed? 2.9 +33 +0 10+HU 3? 3.4 +33 +0 10+HU 4? 4.9 +33 +0 10+HU 5? 7.2

+33 +0 10+HU 6? 6.7 +33 +0 10+HU 7? 1.1 +33 +0 10+HU 8? 1.5 +33 +0 10+HU 8? 1.1 +33 +0

10+HU 8?

!areas rinsed?

!with water?

!+8 +106 /square+9 ?

!R+HD s +L of non-? 2.1 +33 +0 10+HU 3? 2.5 +33 +0 10+HU 3? 3.3 +33 +0 10+HU 3? 5.9 +33

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+0 10+HU 3? 6.2 +33 +0 10+HU 3? 1.2 +33 +0 10+HU 4? 1.3 +33 +0 10+HU 4? 6.5 +33 +0 10+HU 4?

!exposed areas un-?

!rinsed with H+HD 2+L O?

!+8 +106 /square+9 ?

!R+HD s +L of non-? 2.7 +33 +0 10+HU 3? 3.8 +33 +0 10+HU 3? 5.1 +33 +0 10+HU 3? 1.1 +33 +0 10+HU 4? 6.2 +33 +0 10+HU 3? 2.1 +33 +0 10+HU 4? 1.8 +33 +0 10+HU 4? 1.4 +33 +0 10+HU 5?

!exposed areas?

!rinsing with water?

!+8 +106 /square+9 ?

!R+HD s +L ratio of? 1.1? 8.95? 96.1? 654.5? 10806? 5238? 8333? 785.7?

!exposed areas to?

!unexposed areas?

!after rinsing?

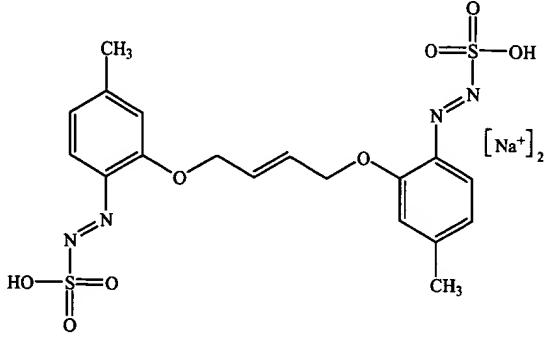
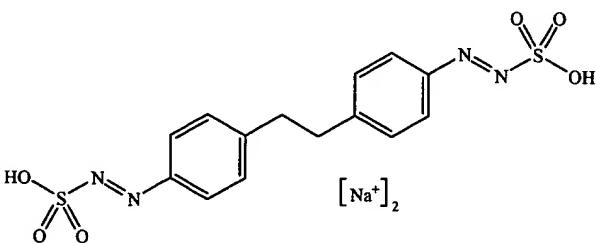
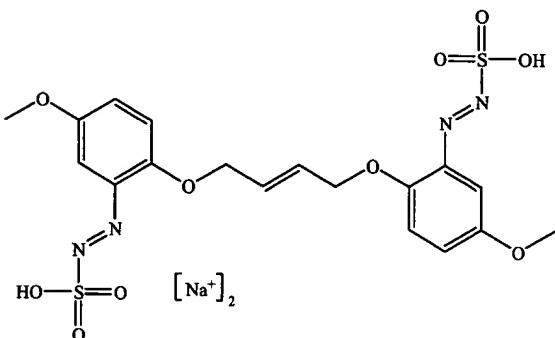
!with water+TZ, 1/50 ?

!+PS

Item character count = 867

Folder character count = 1589

CWU Table Item #: 0150 (2 columns)

	λ_{max} [nm]	absorption of a 25 ppm solution in water
BADS01	308	0.785
		
BADS02	308	1.568
		
BADS03	—	—
		

+T2 +HZ,1/48

!+HC,1 ? +HC,6 ? +HC,9 absorption? +HC,15 ?

! ? ? of a 25 ppm?

! ? +80 +HD max? solution?

! ? +8 nm+9 ? in water+HZ,1/48 ?

!+TC,1 ? +TC,6 ? +TC,9 ? +TC,15 ?

!BADS01 ? 308? 0.785? +GET,0001 ?

!+0

!BADS02? 308? 1.568? +GET,0002 ?

!+0

!BADS03? ? +13 ? +GET,0003 +TZ,1/48 ?

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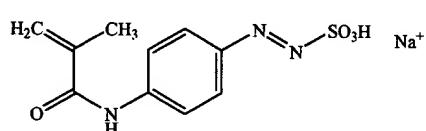
2

!+PS

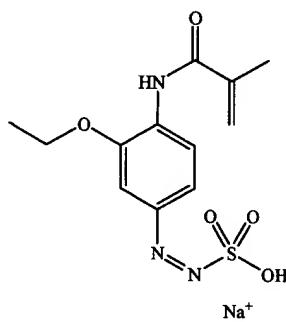
Item character count = 140

CWU Table Item #: 0170 (2 columns)

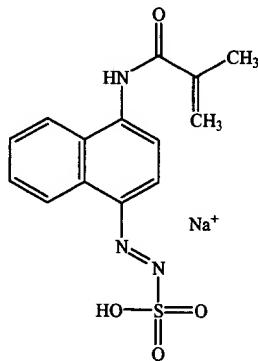
ADS-MONOMER 01



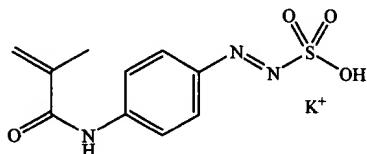
ADS-MONOMER 02



ADS-MONOMER 03

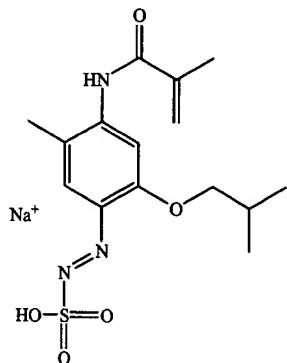


ADS-MONOMER 04

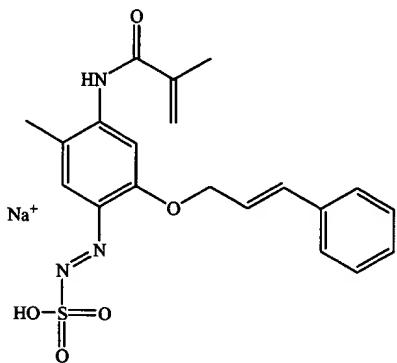


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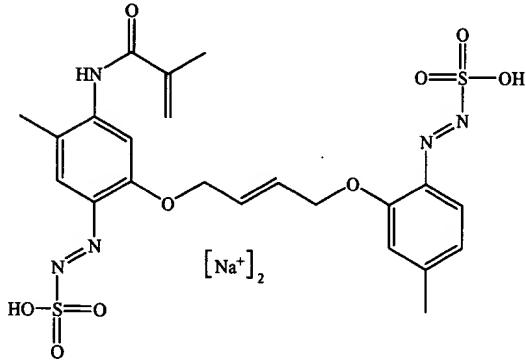
ADS-MONOMER 05



ADS-MONOMER 06



ADS-MONOMER 07



+T2 +HZ,1/40

!+TC,1 ? +TC,11 ?

!ADS-MONOMER 01? +GET,0004 ?

!+0

!ADS-MONOMER 02? +GET,0005 ?

!+0

!ADS-MONOMER 03? +GET,0006 ?

!+0

!ADS-MONOMER 04? +GET,0007 ?

!+0

!ADS-MONOMER 05? +GET,0008 ?

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!+0

!ADS-MONOMER 06? +GET,0009 ?

!+0

!ADS-MONOMER 07? +GET,0010 +TZ,1/40 ?

!+PS

Item character count = 148

Folder character count = 288